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A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

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HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

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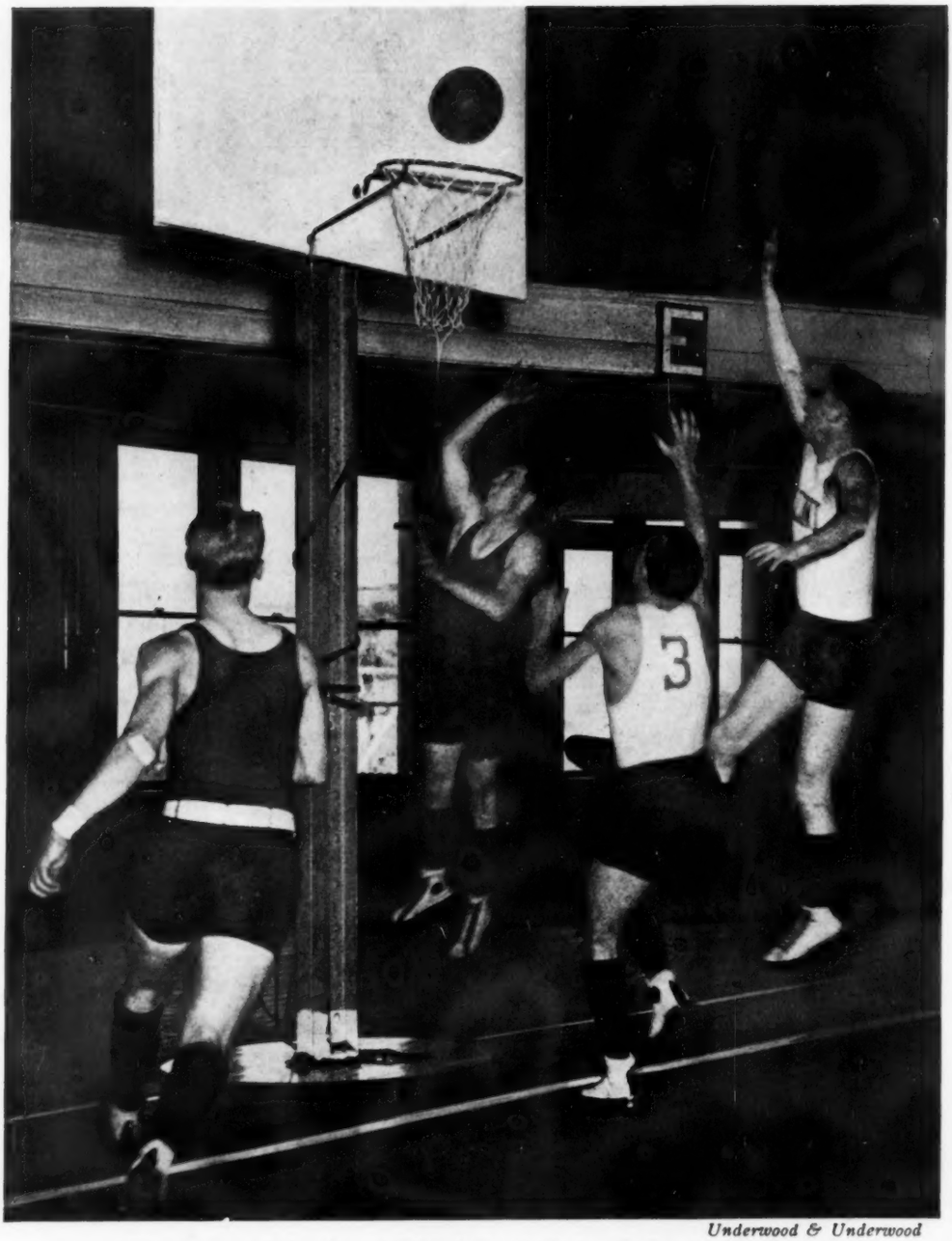
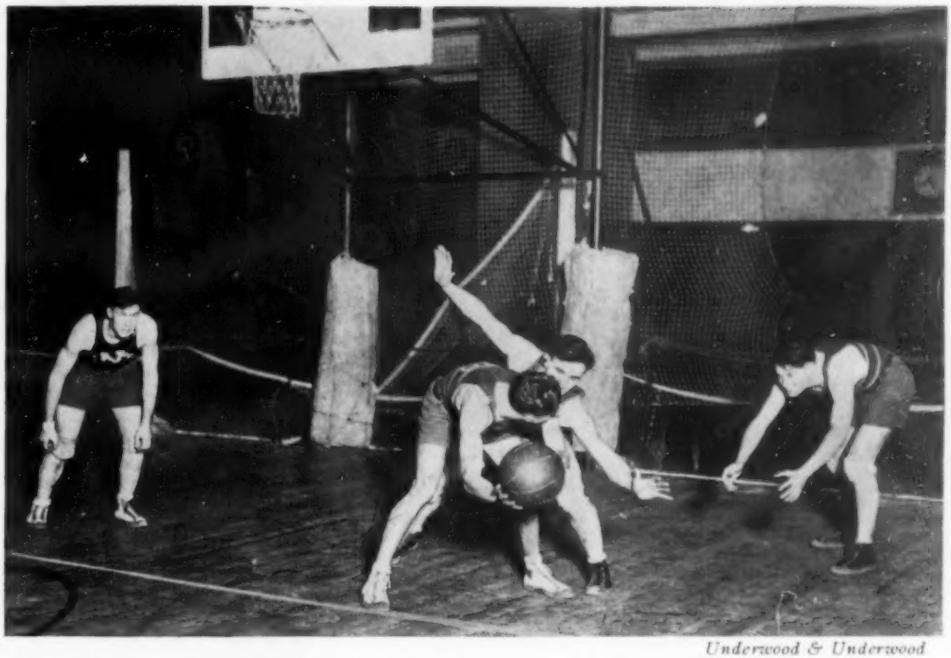


Underwood & Underwood

The forward, having dribbled the ball down the floor, is neatly shooting a basket. A field goal, such as this, counts two points.

Basketball develops players symmetrically, for a combination of weight, strength and speed is essential to the game.



Underwood & Underwood

Basketball—A Sport for Health

F. A. FALLS

WINTER brings the season for the great indoor sports. The youngest member of the family and the most lusty and vigorous is basketball. The growth of the game has been phenomenal. It was invented about thirty years ago by Drs. Naismith and Gulick to supply what was felt to be a lack of vitality in the indoor games as played at that time.

First adopted by the Y. M. C. A. organizations, its popularity rapidly spread to the schools, athletic clubs and various playground and business organizations that fostered athletics. The most striking growth is perhaps seen in the universities. A few years ago championship games were often played before crowds of a few hundred. Now, one of the most difficult problems connected with the game is to find seating space for the spectators.

With these facts before us it might be interesting to attempt to analyze the game in order to determine, if possible, the reasons for its popularity and the benefits derived by its devotees.

What are the good points of the ideal player? Speed is an essential. There is no room on the basketball team for the slow-moving and slow-thinking player, no matter what his strength or skill. On the regulation floor there are 4,500 square feet to be covered and only five men to do it with. The ball has to be worked up to within "shooting distance" and yet the team be ready to rally to the defense immediately should the ball suddenly fall into the hands of the opponents.

Strength is a valuable asset and must be sufficient to enable the player to hold his own in the personal contacts and man to man shocks that are inevitable in the present fast game.

Endurance or stamina is very important and a peculiar fitness for the continuous drive of a hard fought game is necessary. I have seen men of a championship conference football team come off the football field in the best of condition for football and still not be able to stand up under basketball. This is due to the constant drive of the basketball game with no short rest periods between plays and every man active in nearly every play.

Height is a very desirable, although not an indispensable asset of the player. It helps in "shooting" short shots near the basket, receiving high passes, and increasing the visibility of the player to his teammates. It is also valuable in blocking the throws of opponents. A proportionate amount of weight is a decided advantage, as the slender, light man is more easily hurt in the strenuous scrimmage that develops in the hard-fought game.

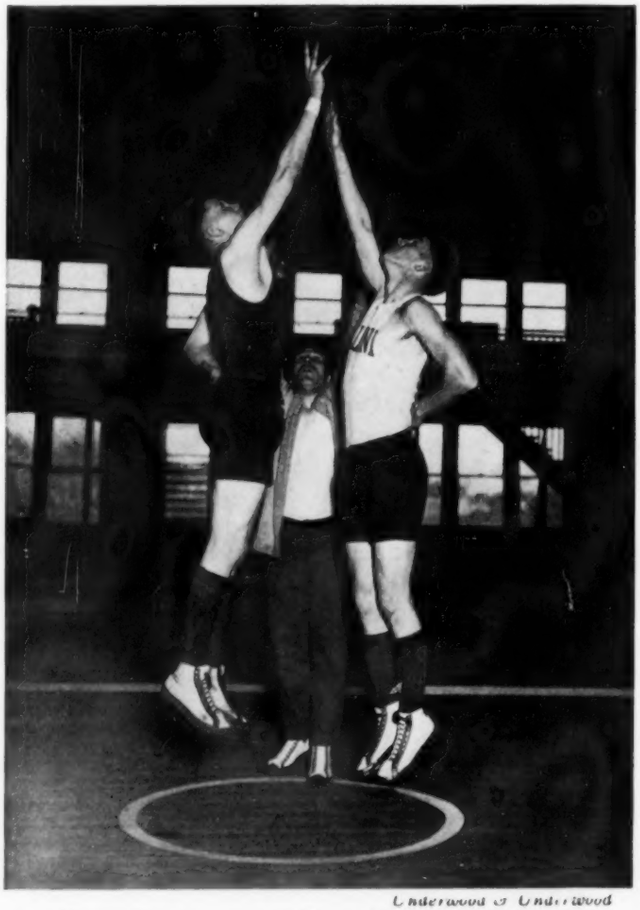
Good eyesight is of prime importance. This means not only a clear and accurate vision but also the ability to judge pace and distance accurately and to coordinate the muscle activity on the evidence received through the eye. In passing the ball to a teammate the eye has to calculate the position the player will be in

Thousands of loyal rooters are watching this Western Conference game.

when the pass is completed, the probable speed of the ball if thrown with a certain force, the possibility of an opponent being fast enough to intercept the pass and whether or not the teammate will be able to try for a goal or will have to return the ball or pass it to another player.

The ideal basketball man must be aggressive and mentally alert. In this game, above all others, the best defense is a good offense. The team that is always on the lookout to take advantage of the "breaks" of the game wins. There is no room for the slow thinker. The situations change with most disconcerting suddenness and decisions have to be made and acted on instantaneously. This habit of snap judgment and execution in the veteran player becomes automatic and is one of the most difficult things to develop in young players.

In addition to aggressiveness and alertness, there is another quality that is extremely important in the basketball man, which for want of a better expression may be called "teamworkiveness." There is no game in which the success of the team depends so much on the unselfishness of the individual player in furthering the interests of the team.



Underwood & Underwood

From the toss-up at the opening whistle, there is nothing but excitement in a basketball game. Play is so quick that often the eyes of the spectators fail to follow it.

The game, if played in its highest form, calls for the strictest possible training as the condition of the players has to be equal to or superior to that called for by any other American sport. Smoking, late hours, overeating, cannot be indulged in while playing on a fast team.

Self control under trying circumstances must be developed. The personal contacts, frequently necessarily rough with opponents, during an exciting game, and at times even in the face of unfair tactics, call for a good deal of self control. The rules are very strict and the play so open that any infringement is almost sure to be seen by an official. In no other game are the spectators so close to the playing field, and the excitement of the cheering and remarks from the crowd so keenly felt by the players.

The game should not be undertaken by other than robust individuals because of the physical harm that might occur from overexertion (in the case of a player with a weak heart or some other organic lesion). Properly supervised and played, the game is one of the most enjoyable and valuable from the standpoint of symmetrical physical development and exercise that we have in the realm of American sport.

Your Baby—How He May Be Kept Well

L. EMMETT HOLT AND HENRY L. K. SHAW

Before the Baby Comes

ANTICIPATION of motherhood should be a source of happiness, never a cause for fear. Giving birth to a baby is natural and normal. As soon as you know a baby is coming, engage the best doctor you can afford and place yourself under his care.

If you cannot afford a doctor, apply to a hospital or dispensary, if there is one within reach, where good doctors and nurses will advise and care for you.

Allow nothing to worry you. It is bad for you and for your baby. A nervous, overworked, underfed woman cannot expect to have a strong, healthy baby.

The soon-to-be mother should have an extra amount of sleep, and a daytime nap of at least an hour. She should keep the windows open while she sleeps.

The use of the sewing machine and much climbing of stairs should be avoided during the later months of pregnancy.

Hard household or factory work during the later months often brings on miscarriages or makes the baby small or delicate.

When labor is threatened before the proper time, the mother should go to bed at once and remain perfectly quiet until the doctor assures her that the danger is over.

Walking in the open air may be done during the entire time of pregnancy. Such exercise and light housework will do more to keep you well than medicine.

Take simple and enjoyable recreation that is not tiring. Avoid excitement. The jouncing of an automobile during the last few months is especially to be avoided.

Daily bathing is indispensable.

At least one free movement of the bowels should take place every day; otherwise the doctor should be consulted, for this is something that no woman can afford to neglect.

To secure proper action of the kidneys one should drink from four to six glasses of water every day.

The teeth should be examined and treated early in pregnancy and brushed at least twice a day.

Loose clothing is essential to comfort. Skirts and dresses should hang from the shoulders; there should be no tight bands about waist or chest.

Breasts and nipples should be kept clean and softened with a little vaseline every day; this will make nursing a pleasure instead of causing the pain and discomfort sometimes present.

Mothers should have plenty of simple and nourishing food; the baby must not be starved before it is born.

A diet of tea and crackers will not make a strong, healthy baby. Highly seasoned, rich and fried foods should be avoided. The common belief that in order to have an easy labor a woman may starve herself during pregnancy is false and its consequences are dangerous. Overeating taxes the organs that care for waste material and may cause serious illness. You do not have to eat "double."

Diet

The food should be simple, nutritious, and easy to digest. The following may serve as a general guide:

All kinds of plain soups.
Fresh fish, oysters, and clams.
Most meats in moderate amounts, never more than once a day.
One egg a day.
Cooked cereals with thin cream and sugar.
No fresh bread or rich cake.
All green vegetables.
Only the simplest desserts, such as custard, ice cream, and plain puddings.
Fruits in abundance, ripe, raw and cooked.
Drinks—milk, buttermilk, cocoa, and plenty of water, five or six glasses daily; tea and coffee sparingly.

Necessary Things for the Baby

Three-quarters yard thin, light-weight flannel.
Two light-weight woolen blankets.
Three flannel bands, 6 inches wide and 24 inches long.
Three cotton and wool undershirts.
Three flannel skirts.
Three outing flannel gowns.
Four cotton slips.
One and one-half dozen diapers, 18 inches.
One and one-half dozen diapers, 22 inches.
One box boric acid.
One box talcum powder.
One piece castile soap.
One-quarter pound sterile gauze.
One-quarter pound sterile absorbent cotton.
Two dozen safety pins, large and small.
Weighing scales.
Separate crib or padded basket or box.
Bathtub, rubber, tin, or galvanized iron.

Necessary Things for the Mother

Three nightgowns.
One and one-half yards square oil-cloth or rubber sheeting.
Two pounds absorbent cotton.
Two pounds sterilized gauze or equivalent in old clean linen.
Three bed pads, 30 inches square, quilted to cover half the bed.
Fountain syringe bag, two quart size.
One douche or bed pan.

The New-Born Baby

There should be a warm, soft blanket to receive him.

The body should be oiled, not bathed.

The eyes should be carefully cleansed with a solution of boric acid, and into each eye the doctor or nurse should put two or three drops of a two per cent. solution of nitrate of silver to prevent sore eyes and possibly blindness.

The baby should be placed in a quiet, darkened room, protected against the cold but not surrounded with too many hot water bags

or bottles; these should be well covered with flannel or they may burn the baby.

The law requires that every birth should be registered. The parents should see that this is done by the doctor.

Reasons Why You Should Nurse Your Baby

Breast milk is always ready and is never sour.

Breast milk does not have to be prepared or measured.

It is Nature's food and was intended for your baby.

It will make him strong and healthy.

It is free from germs and dirt.

It protects your baby from many dangers and diseases.

It is safer. Ten bottle-fed babies die to one fed on the breast.

It is the only perfect food for the baby.

It contains the proper elements of food in the right proportion.

Breast-fed babies seldom have bowel trouble, which is so often fatal in bottle-fed babies, especially during hot weather.

Your baby will have the best chance of living if breast-fed.

Nursing Rules

The baby should not be put to the breast for five or six hours after birth.

During the first twenty-four hours the baby should not nurse oftener than every six hours and should not remain at the breasts longer than five or six minutes; both sides should be given every time. If he cries much, boiled water may be given, but not tea, nor sugar and water.

Beginning with the third day, when a full amount of milk comes, he should begin regular

nursing at three-hour intervals, alternating the breasts, or taking both breasts each time according to the amount of milk secreted. He seldom should remain at one breast more than ten minutes in all.

Large babies are more developed and usually must be fed at three-hour intervals on the second day.

Nursing should be regular by the clock; regular feeding means regular sleep and these things make the care of the baby much easier.

In the beginning one should waken the baby at nursing time; soon he forms the habit of waking himself at the regular interval.

In case the milk is delayed longer than the third day, the baby should be fed at three-hour intervals, but he should be regularly put to the breast first in order to stimulate the flow of milk.

To Nursing Mothers

Keep well yourself. When you are well, your baby will probably be well.

Don't get discouraged if you have but little milk at first. Feed the baby from the bottle after nursing when necessary; but do not give up nursing. Be patient and keep trying.

Eat plain nutritious food, avoiding salads, pickles, and spicy rich foods.

Drink plenty of water and milk, avoiding strong tea, coffee, and all alcoholic beverages.

Nurse regularly; feed by the clock and not longer than fifteen minutes at one time.

Until he is three months old, nurse every three hours up to 10 p. m. and only once during the night; seven nursings in twenty-four hours.

After he is three months old, omit all night nursings; give but five nursings in twenty-four hours, usually giving both breasts each time.

If the baby cries between feedings, give him cooled boiled water without anything in it.

Do not wean or give any other food without the advice of a doctor.

The bowel movements of a breast-fed baby are usually a bright yellow color, not foul in odor, and of a butter-like consistency. They are from one to four a day. Very often the movements have a greenish color, contain soft curds and are somewhat loose. If the baby is gaining regularly in weight, such movements are not important and are no reason for giving medicine or weaning.

The return of the monthly sickness, or a slight illness of the mother, are not reasons for weaning. There may be less milk at such times and the baby may need additional food. If the mother has a cold she must, while nursing, cover her nose and mouth with a handkerchief, so that she does not breathe, cough, or sneeze in the baby's face.

Weaning

If a mother becomes pregnant, or has any serious or severe acute illness, the baby should be weaned.

Under other circumstances, if the baby is thriving normally, nursing should be continued without other food until he is eight or nine months old. At eight months orange or other fruit juice may be given, especially if there is constipation; and at nine months well-cooked, strained cereal once and later twice a day just before nursing.

If after a few months the mother has not quite enough milk for the baby, she should not think of weaning him. Instead of giving a bottle in place of a nursing it is much better to nurse at the regular time and follow immediately with a bottle feeding, large enough to satisfy.

The baby soon tells by his actions if he is satisfied—he drops off to sleep quietly or lies awake happy and contented. If he is regularly fussy and fretful after nursing, one may be sure that he is hungry and not suffering from colic.

Weaning should be done gradually if possible, by giving the baby at first one, and later two or more, feedings from the cup or bottle in place of a nursing.

The number of feedings should be gradually increased until the baby is taken entirely from the breast at eleven or twelve months.

If the baby is weaned before eight months he should be taught to take the bottle; if at ten or eleven months old, it is better to teach him to drink or feed him from a spoon.

Artificial or Bottle Feeding

There is no perfect substitute for breast milk.

Clean, fresh cow's milk properly modified is the best substitute available.

Prepared infant foods should be avoided; they are not fresh; they are expensive, and the babies fed on them are more liable to be sick than those fed on cow's milk.

(NOTE: THIS PAPER WILL BE CONCLUDED IN THE JANUARY ISSUE OF HYGEIA.)

KING TUT AND TUBERCULOSIS

If Tut-Ankh-Amen had known 5,200 years ago what we now know about tuberculosis, he might have continued to ride through the streets of Thebes in that wonderful golden chariot for possibly fifty years more instead of being an untimely victim of a preventable disease. But tuberculosis is no respecter of persons. It takes high and low, rich and poor. And how the young king did hate to go, judging by the way he clung to his treasures even in death, in the hope of being reunited with them some time in another world!

If he had lived today, his doctors would have detected the first symptoms of the disease and ordered his Royal Highness to the simple life—back to nature, rest, a rational diet, medical supervision, away from the fast pace of court life for a few months and back he would have come with rosy cheeks and springy step feeling more like a king than ever.

But then, if they had known as much about tuberculosis 5,200 years ago as we do now, there wouldn't be much, if any tuberculosis now. This is shown in the remarkable decrease in the deaths from tuberculosis in the United States in the past twenty years since the strenuous fight against this disease was started by the National Tuberculosis Association. The number of deaths then was over 200,000 every year. It is now less than 100,000—cut more than one half in twenty years!

One of the greatest contributing factors in bringing this about is the little Christmas Seals which are distributed every year in December, giving every man, woman and child a chance to help fight disease and promote health in their own community.

Chicago's Police Meet—A Lesson

EDWARD C. DELAPORTE

ON September 8 and 9, more than a hundred thousand people turned out to a competitive meet to see the Chicago police department perform. There is nothing that brings out the best in men as does competition. The strife to land among the winners has a permanent effect in developing and preserving the morale as well as the physique. Man has always needed mental and physical competition. Modern man is usually amply supplied with mental stimulus but, for the most part, must provide his own physical competition. Physical competition in this age, of course, can be secured only from one source—athletics. Each day finds hundreds joining the ranks of health seekers and physical training, athletics and their influence on the health and life of the individual is becoming an important study in the modern home.

Chicago people turned out in droves to watch Mike and Pat, John and Dan perform. And perform they did! Here's the story of the police meet by the man who put it across.

It aims to teach, by example, a lesson that Chicago has learned. Read it!

Health education is invading many fields and last to feel its pulse are the body guards of our Windy City. Chicago's police department has entered *en masse* and with great enthusiasm the new kind of training. All appreciate that bodily control, good posture, alertness, will power and courage are an important part of the equipment and education of individuals who are daily called upon to serve the inhabitants of a great metropolis.

One of the most important requirements of a policeman is that he be able to handle and control his body easily under all conditions. By handling his body well he escapes physical injury, possible death and saves lives.

Men with flabby muscles and large abdomens are prone to do flabby thinking and, as a consequence, act with corresponding inefficiency in all matters in which they participate. Competition in athletics and team games has impressed on the mind of the policeman the necessity of team work, an essential factor in any police organization. Lessons learned on the athletic field and in the gymnasium will be carried into the daily work of every man, reflecting credit on the individual and the department as a whole.

Every man is taught to have a great ambition to be well, to keep fit, to fight disease, to prolong life and to maintain his own physical well being, thus combating misery, poverty, vice and crime. Men physically fit do not violate the fundamental laws of health and are free from temptations which beset men who make no effort to keep in good physical condition.

It was the former superintendent of police, and the president of the Chicago Public Schools Athletic League, who first saw the necessity of having the personnel of the Chicago police department physically fit. Athletics, they thought, would prove a diversion from regular duties and furnish interest then confined to only a few precincts. In addition, an organized athletic meet was suggested and received with enthusiasm by heads of the department and the rank and file.

Cockade tilters with masks, cockades, fencing sticks. Horses and riders make a colorful, medieval picture.

It was realized that a policeman's athletic meet would serve two purposes, first, raise the morale of the department, second, raise funds for the widows and orphans of Chicago police. In previous years a theatrical entertainment had been held. Athletic games could be conducted at a fraction of the cost of professional acts, and

They're off! Start of the 440 yard dash.

when members of the force instead of professional entertainers took part, it would add the interest of policemen, their families and their friends.

Chicago police department heads, with the aid of interested business men, organized committees, and plans were made for the first Chicago Police Track and Field Meet. The first games were held in Grant Park in 1922. There were over 100,000 people in attendance on both days of the meet and it was pronounced a success athletically and financially. The meet this year was even more successful in point of attendance, number of entries and the manner in which it was conducted.

These meets gave the people of Chicago a chance to see and judge for themselves the physical capabilities of their police force. The meet went a long way to satisfy the curiosity of many who thought a copper could not run a hundred yards without falling down. Not only did interested onlookers see the blue coats run the dashes in a little better than average time, but saw them step quarter, half and one mile runs in time which certainly was a credit to the department. These field days served to create a more friendly feeling among that part of the public that regarded policemen simply as thief catchers. Here the same officers who are guardians of life and property in the community were seen in the rôle of citizens active in the endeavor of demonstrating their prowess as athletes.

The police athletes in the recent contests were in far better physical condition than in 1922 and it was proved by a comparison of the records that all marks were bettered this year.

Police field days are opened in true Olympic fashion with officials and athletes in parade. The hundreds of competitors in costume, some

Mounted Push Ball is one of the most exciting and entertaining events in the meet. Each team is composed of eleven horses and riders. The rivalry is keen and the big ball does some quick moving. The competitive sports bring out the best in the men. A spirit of camaraderie is developed, and the spectators at the meet find, to their amazement (motorcycle cops not to the contrary), that policemen are human, enjoy the same things that they do, and do them mighty well.

mounted, hundreds afoot and others on motorcycles make a colorful picture.

Many may question the effect of athletic instruction in the police department and the wisdom of staging field days. Recall the police department of a few years ago! The local guardians of law and order were looked upon with suspicion, thought inefficient, attacks and criticisms upon the department were frequent and popular, and the average person felt a distinct distrust of the police in general. Then note the radical change in public sentiment toward the law enforcers since the last two field meets. One feels that field days are the thing!

People have discovered, to their amazement, that policemen are human, enjoy the same things they do and can do them well. Citizens of Chicago now believe their police the equal of any in the country, and what is better, the rank and file of the department believe in themselves as they never did before.

Sectional Events

For the purpose of sectional events, the city was divided into three divisions, southern section, central section, and northern section. Captains were designated to have charge of the sections and were authorized to select men from the districts comprising their sections for the purpose of participating in the events.

These were the sectional events: Foot Shuttle Relay Race, twenty men on a team; Chariot Race (in this race real circus chariots were used), fifty men and a charioteer comprising a team; Tug O' War (on foot), fifty men on a team; and Push Ball (on foot), twenty-five men on a team.

Mounted Events

The mounted events were carefully selected and the men and horses were given a very careful training course. The events were: Push Ball Mounted, teams of eleven horses and riders; Mounted Watermelon Race (there were six horses and riders entered in this event); Cockade Tilting, five horses and riders on a team, properly equipped with masks, cockades and fencing sticks; Mounted Wrestling, five men and one sub on each side, horses to have regulation bridles, circingles and blankets. Any hold except the strangle was permitted in Mounted Wrestling.

Motorcycle Events

In Motorcycle Polo, there were five men on a team, mounted on the regulation police department motorcycle. This event always proves exciting and entertaining to the spectators.

Entries from the rank and file of all grades in the department totaled 1691 the first day and 1666 on the second. The details connected with this meet are not a few and naturally called for great preparation before the games. All heats were drawn and teams assigned for relay events before the first day and commanding officers in each district were sent all necessary information a week before the big contest.

The mayor, prominent business men and houses and local newspapers did their share toward making the meet successful and showed their interest with generous donations and trophies galore. The meet was conducted without a hitch. Feature and novelty events kept the kiddie audience in a continuous uproar and the more dignified spectators were provided with three hours of exciting races, field events and exhibition drills.

The rivalry between districts and individuals for trophies and honors is becoming keener each year. These meets are developing a surprisingly large number of fine athletes. The time is near when the Chicago police depart-

Tug O' War with fifty men on a team! What boy, grown or small, can't find a thrill in rooting for the side his favorite cop is on. As one little chap put it to his pal when the meet was over and they were filing out of the park: "Gee, Jimmy, these cops are regular guys."

ment will be composed entirely of trained athletes.

The Chicago police department is just at the beginning of organized athletics and compulsory physical training. The Police Field Meets are, undoubtedly, permanent fixtures and, within all probability, there will be intercity competition with New York, Philadelphia, Boston, St. Louis and San Francisco within the next few years.

In order to make benefits derived from the recent field days lasting to the members of the department, there probably will be installed a compulsory system of physical training and athletics, under the direction of a competent athletic director. The sole duty of such a person and his assistants would be to interest every member of the force in his own physical condition. Each policeman must realize he needs and must secure a certain amount of physical exercise of a recreative type every day in order to keep in prime physical condition.

Under trained athletic directors, the younger members of the department could be given the opportunity to take part in year round athletics and there is no reason why the police department should not have football, soccer, baseball and basketball teams in active competition.

Chicago is blessed with a large number of gymnasiums and athletic fields which are conducted under the direction of competent instructors, who are always willing to assist in the training and carrying out of instructions as issued from the office of the superintendent of police. These public gymnasiums and athletic fields may be used for the purpose of training the policemen and the local armories, one on each side of the city, could be secured for physical training purposes.

In formulating a compulsory physical training program for the police department, the athletic director would work in complete harmony with the police department medical staff. There should and would be periodical medical examinations. The physical condition and the weight of the men would be carefully kept and charted and from the information derived, the proper dosage of exercise would be prescribed. The kind and type of exercise would be regulated by the information secured from the medical staff and related to the age, weight and physical condition of the individual. The setting up exercises, however, would be common to all. Boxing, wrestling, running and methods of self defense would be included in the physical training program.

PREVENT CHILD LABOR

America's children cannot be said to be "free" when child labor exists in this country on a far greater scale than in any of the so-called civilized nations.

This statement, astounding as it may be to many, is made by Dr. Owen R. Lovejoy, sociologist and secretary of the national child labor committee, in an article appearing in the current issue of *The Delineator*.

Dr. L. Emmett Holt, who is a contributor to this issue of HYGEIA, has written the introduction to the article, and in it he points out that the consequence of child labor is a race of stunted, undersized boys and girls who develop into physically inefficient men and women.

"For children to have duties about the home, and, as soon as they are old enough, to aid father with the outside work on the farm is one thing; but for children as young as eight or ten years to be exploited either by parents or employers in factories, in canning establishments, in cotton-fields or on beet-sugar plantations is quite another," writes Dr. Holt. "As carried on in many places, this comes mighty near being slavery."

That 1,600,000 children between 10 and 15 years old are employed in sweat shops, street trades, domestic service, textile mills, coal mines and similar pursuits is shown in the 1920 census figures, and this, according to Dr. Lovejoy, does not nearly represent the total number of child workers in the country.

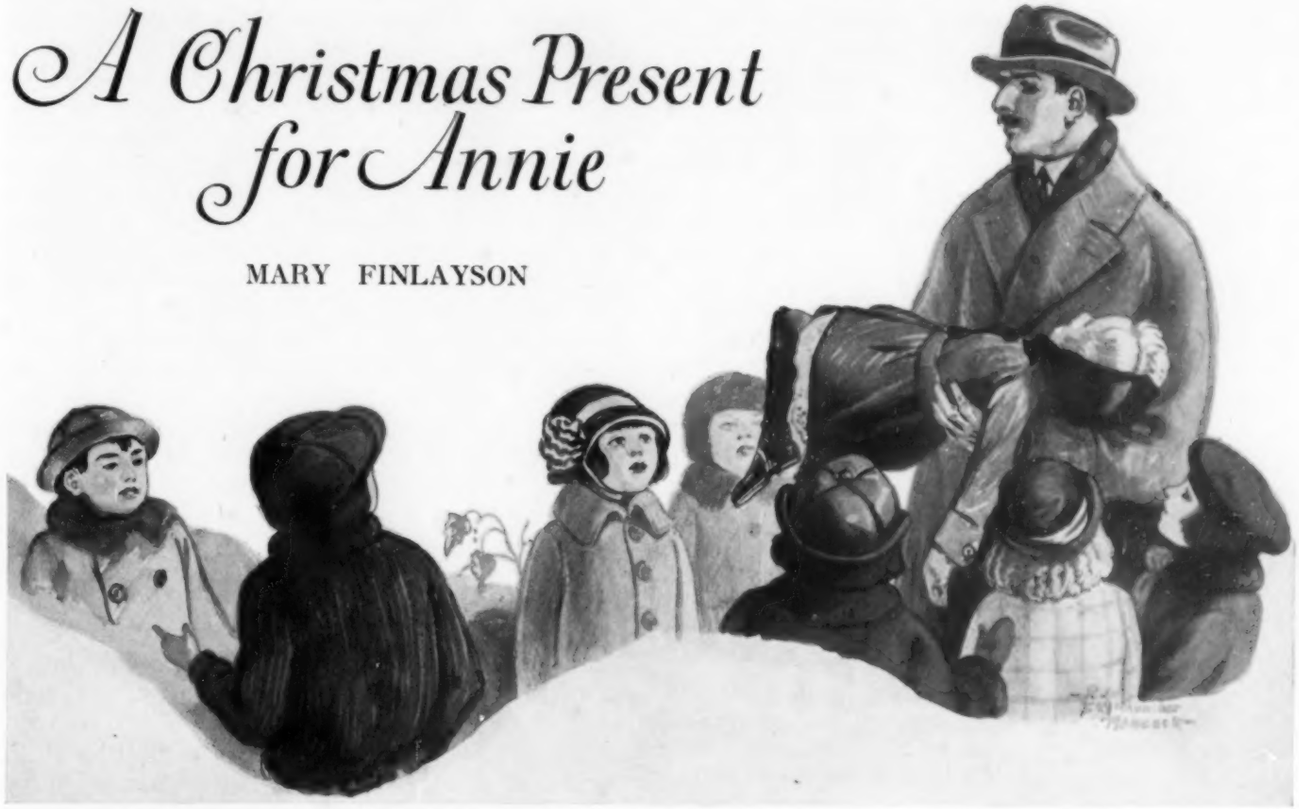
Child labor, of course, is a menace to education, and in places where it is largely employed the children do not get during a whole year more than two months in any kind of a school. Then, too, the schools available for them are a disgrace to the country, in Dr. Holt's opinion.

The most real danger in child labor, however, lies in the fact that it is injurious to health. Physical examinations of drafted men during the world war showed that industrial centers which promoted child labor during the past generation had a marked tendency to turn out young men of inferior physique. In some states, children are physically examined in order to obtain employment certificates, but after this has been done no further attempt is made to learn the hazards to which they are exposed, what injuries they suffer, how early they die or at what age they are thrown crippled, deformed or exhausted upon the industrial scrap-heap.

Dr. Lovejoy's chief remedy for the situation lies in the securing of federal legislation preventing child labor.

A Christmas Present for Annie

MARY FINLAYSON



I ENTERED the cloak room, pulling my gloves off as I walked. In a moment, I had hung my coat and hat upon their accustomed hooks, had fastened my apron about me, had given a perfunctory pat to my hair, and was ready for work. Much must be done this last week before Christmas, and little time could be wasted. With each of my twenty-three children (except, of course, poor little half-witted Susie) making Christmas gifts, with ten of the twenty-three learning verses for the Christmas exercises, with all the usual rush of Christmas preparation, my every minute in school was full to capacity. So this morning I darted, flitted and bustled, with all the air of the busy school ma'am, until every wreath, every picture, was in its proper place.

The last bell rang, and my family of kindergarten children came rushing up the stairs to the cloak room door.

"G'mawnin', Miss Sampson."

"Good morning, Stanley."

"G'mawnin', Miss Sampson."

"Good morning, Peter."

"G'mawnin', Miss Sampson."

"Good morning, Alberta."

And on, and on, shaking brown hands, black hands, white hands, yellow hands; helping with an unwieldy button here, a stubborn overshoe there, a bonnet string, a tight mitten, until at last the entire flock was in the room, and ready for the morning's work. What a contrast to the room they offered! Through the windows, gay with ruffled curtains, rays of sunshine descended upon wooly heads. Shafts of light revealed dirt upon ragged frocks, and disclosed the "high water mark" on more than one pair of wrists. The schoolroom, a moment before bathed in quiet winter reverie, became now a veritable hubbub of varicolored humanity, ranging from ultra-blond Tessie, of the liquid blue eyes, to fat, black Alberta, washwoman in embryo. Little red-brown Manuel, sole representative of the section gang, showed a row of glistening teeth as he smiled his gay "Goot mo'neen" to me. Evidently Manuel was taking very much to heart my daily advice upon the care of the teeth. Or, perhaps it was not altogether the advice. Possibly the bow of bright red ribbon, offered as the reward of virtue, at the end of each week of scrupulously clean teeth, had something to do with Manuel's pearly smile.

Suddenly, a gay voice emanated from the threshold of the cloak room.

"H'lo, Mith Thampthon."

I turned again toward the door, where stood small Annie, decked in bizarre costume of original, if useful design. Two large shoes, obviously unmated, were tied to her feet by strips of rags, intricately wrapped about her ankles. Stockings she wore, but, undisciplined by garters, they fell about her shoe tops, revealing two red little knees. Doubtless the elastics I had given Annie the Friday previous had followed the way of half a dozen other pairs, and were now doing duty as sling shots for her two irrepressible older brothers.

Annie's cold, unmittened fingers were futile against the knots of her bonnet strings, so I offered my assistance. The bonnet, removed, which should have revealed a crown of golden curls, showed instead a mass of tangled, sticky thatch. And cheeks that should have been the shade of blush roses were coated with a collection of dirt that dated back to the middle of last week. Doubtless it would remain there, altered only by the addition of new layers, until Wednesday, when I should take my laundry tub from its hook, as was my Wednesday custom, and scrub her once more to a state of temporary respectability.

"Annie," I admonished, as I helped her remove the tattered garment that was called a cloak, "Annie, what *have* I told you to say when you come into the room in the morning?"

Annie struggled to suppress her gay smile, as she puckered her brow in thought. Then, brightly, as though, after all, what I said were a matter of small concern, "I forget, Mith Thampthon."

"Now, Annie, I'm going to tell you, and then I want you to say it to me. *'Good morning,* Miss Sampson.' "

"Good morning, Mith Thampthon," responded Annie.

"Miss Sampson, dear," I urged, stressing the "s's."

"Mith Thampthon," repeated Annie.

"Say 's', Annie."

"Ssssththth."

"S," I repeated.

"Sssss," hissed Annie, triumphantly.

"Good! Now, Annie, say what I told you to."

Annie paused for a moment, as she collected her wits for the attempt. Then, flushed with triumph,

"H'lo, Miss Sampson!"

"Oh, Annie!" I chided, "Part of that was splendid, but you *must* learn to say 'Good morning' instead of 'hello.' Now try again."

Once more Annie paused—I was inclined to believe that breath, instead of thought, controlled these pauses!

Then, "Good morning, Mith Thampthon," she said.

I let it go. For days and days—for weeks, I had worked upon this wayward tongue of Annie's, with at best a half hearted result. I was slowly arriving at the realization that I must not expect complete victory in any skirmish with it, especially when more than one point was involved.

Now I released Annie, and watched her while she made a complete circuit of the room, drinking in all the beauty of the Christmas decorations. Timidly she fingered a strand of popcorn and bright cranberries that she herself had helped to string; reverently she gazed upon a soft mezzo-tint of "The Madonna and Child." To the other children, who by this time were talking among themselves, she said nothing, but passed from one object to another, laying a timid finger-tip upon a holly wreath, and gently pushing a small Christmas bell, to hear the faint tinkle of its tiny clapper. From all this she suddenly broke away, hurried past the radiator, which must certainly have extended a tempting invitation to her chilled knees and fingers, and on to the "doll corner." There, arrayed in gingham finery, lived our family of kindergarten dolls. A bed to sleep in, a chair to sit in, and a cab to ride in, not to mention a tea-party table; such was the furniture of the dolls.

And there, each day during the twenty minutes, more or less of "free play" that was granted the children, Annie kept house. Others played ball, drew pictures, built houses of blocks, played train; played, in fact, at innumerable other games; but Annie, each morning since her first day in school, had gone to the doll corner. With her tiny broom, she kept it neat and tidy. With a diminutive washcloth, and a bowl of real soap and water, she kept the dolls' faces immaculately clean. And, on a real little wash board, in a real little tub, filled with convincing suds, Annie scrupulously rubbed the dolls' clothes. Often, the entire wardrobe suffered a bath on two successive days. But to Annie that made no difference. In her small heart, she was satisfying the all-conquering instinct—to cherish her doll-babies, and rear them by approved methods; and, since it must be crowded into the short space of twenty minutes, then Annie must crowd the activities accordingly.

For Annie possessed no doll of her own. Not even a rag, nor a wooden doll, could Annie claim with maternal pride. Rags, at Annie's house, were needed for clothes, while wood served to keep the fire going. So Annie had no doll. True, early in the school year, when I had first learned the unhappy news, I had given Annie a doll myself. But, though I reveled in the safety of Annie's doll (as it was neither of rags nor of wood), my satisfaction was short-lived. For within less than a week, Annie's doll was torn from her arms, and sacrificed for its money value. With that effort I stopped. I *would* buy Annie dolls, but I would *not* contribute to the support of her shiftless family!

This morning, I watched her intently as she rocked gently back and forth in a tiny chair, singing a shrill lullaby to the doll she nestled in her arms. She paid no heed to the twenty-two other children playing about her; just rocked and rocked, drawing a diminutive blanket solicitously about her doll child from time to time, as she sang.

I looked at my watch. The twenty-minute play time had elapsed. Going to the piano, I played a soft chord, to which the children responded, coming to sit on the rug at my feet.

"Annie, each morning since her first day in school, had gone to the doll corner."

Reluctantly Annie rose from her chair, tiptoed to the doll bed, and gently laid the doll upon it. Then, drawing the covers to its chin, she gravely tiptoed to her place on the rug with the other children.

I have heard people speak of a child being "starved for love," but never have I seen such an example of it as I was wont to see on Annie's face each day, when she laid aside the doll. If only I could give her a doll for Christmas! But what would be the use? Another gift of that sort would only cause her to suffer again the agony of separation she had experienced before.

The morning passed quickly, as always. The spirit of Christmas pervaded everything. Christmas songs, Christmas verses, Christmas stories; I believe that the children loved the Christmas stories best. And Annie, breathless, as always, from sheer joy, would cry, "And doth Thanty Clauth go *every* where?"

To which I, despite a sickening fear for the fate of Annie's Santa Claus, replied always in the affirmative. At least, I said to myself, Annie should have extra candy and nuts, and perhaps an apple or an orange, at the Christmas exercises. More than this I dared not promise

myself, for, in a rapacious family in which garters were appropriated for sling shots, and dolls were sold for the addition they could make to the family exchequer, I dared give Annie no more than could be handled at one sitting, as it were.

The morning session was over, and once more I was helping the children with wraps. Now I bent over small forms, tugged at rubbers and overshoes that had been bought to fit last year's shoes, held unruly collars beneath equally unruly coats, until at last each small charge was ready to face the cold. Two large safety pins, applied to Annie's hose, served temporarily (how temporarily I dared only guess) to keep them in position.

When the last child had gone, I turned once more to my desk. There, busying myself with records of attendance, records of work, records of mental advance, and so forth, *ad infinitum,* I forgot, for a few minutes, the affairs of Annie. But not for long. Hearing a commotion in the hall outside, I looked up. A man was entering the room, and in an excited group at his feet hovered a circle of children. In his arms, I recognized the rags and tatters that were Annie. I was on my feet in an instant.

"She ran out into the street," he explained, in a low voice. "She ran so rapidly, that I hadn't time to stop my car. I ran completely over her. She's not—dead, I think," he added, with an effort. Then, "The children told me she belonged here."

"Yes," I replied, and, to the excited children, "You must go home now. Annie will be all right." Then, to the man, "Bring her here."

He carried her gently to the couch that I kept in my room, and laid her upon it. Ages, it seemed, before a doctor arrived. Ages, during which we could only dimly guess at the significance of the cuts and bruises. Ages during which each separate moan of Annie caused fresh heartbreak—but fresh reassurance.

Then, the visit of the physician, and his verdict.

"She must be sent to the hospital," he told us, "both her legs are fractured, and an arm is broken. She may have other injuries, although I can't be positive about that until I use the X-ray."

In the hospital, that afternoon, I was admitted for a few moments to Annie's bedside. Her usually gay little smile fought wanly for victory when she saw me approaching. One arm was free of bandages, and she looked at me with difficulty from beneath the swaths of cotton tape that were bound about her head. When I was once more in the hall, the nurse revealed to me the findings of the X-ray.

"It's not as bad as they first thought," she confided. "Her right arm is fractured in two places, and both legs are broken, but in rather clean breaks. Two ribs are fractured, but her back seems to be safe. Of course, even then, it means weeks in the hospital."

Each day, after school, I visited Annie, taking with me tokens of love from her little classmates; an apple, a sticky piece of candy, a torn picture, a stick of gum, in part or whole; until Annie's table resembled a well-equipped junk shop. But all of these things Annie accepted with the utmost naiveté, for gifts of any kind were a distinct novelty to her. And woe be unto the ill-advised individual who dared to molest her treasures! For in no miscellaneous assortment were these gifts displayed upon her table, but rather in orderly rows, arranged strictly in the order of presentation. Thus, a dried apple in the extreme left, back corner, had been the initial gift; next, the arm of a once-Parisian doll; beside it a miniature lantern; next to it a brass ring, then a rubber ball (the bounce of which had long since departed) then a soap bubble pipe, a piece of lace, a marble, a shiny green stone (called a diamond by its donor) and on, through a display of varied subjects, to the most recent addition, a spool-and-pencil top.

But I was astonished one afternoon to discover the table display a topsy turvy wreck, the ball gone, and with it the marble, the top, and everything that offered the remotest possibility of being edible. And Annie, lying prone upon the pillows of the bed, was sobbing as only a heart-broken child can sob.

"Annie, dear," I cried, "Tell Miss Sampson the trouble. What has happened?"

But Annie's sobs only increased, while to my question she ventured no answer.

I held her hot little hand in my own, while I tried to learn from her the source of the trouble. But not a word would she reply. To every question I asked her, she only shook her head, and sobbed anew. I looked at the children in the other beds, hoping to discover one who might explain Annie's grief to me. But the only vacancy when Annie had come to the hospital, had been in a ward with very young children; consequently, there wasn't a child more than four years old, and I knew without asking that none of them could reveal to me the cause of Annie's anguish. I heard the nurse approach the door, and beckoned to her. Seeing Annie's distress, she rushed to the bedside.

"Do you know what's happened?" I asked her. "I can't get Annie to tell me."

"Why, no. She was all right a few minutes ago when I was in here. What under the sun has happened to her toys?"

But to the nurse, as to me, Annie maintained a sphinx-like silence, her eyes only growing bigger and more frightened, as her resolve not to tell seemed strengthened. For several minutes we alternately urged and soothed, but finally, convinced that we were getting nowhere, we rearranged the remains of Annie's treas-

ures, and endeavored, with stories surprisingly impromptu, to turn her thoughts to other channels. A half hour later, when I left the nurse feeding Annie her supper, tears still glistened in the child's eyes, and her head turned restively toward the table after each mouthful, that she might survey what was left of her small fortune.

All that evening I pondered. It couldn't have been any child in the ward, and no child in the corridor would have dared disturb. There was one possibility. And the more I thought of it, the more convinced I became that I knew the source of Annie's grief.

The next afternoon I left school promptly, and rushed to the hospital, in order to be on time. When I arrived, I did not go to Annie's ward, but hunted until I located her nurse, who was on duty in another ward, farther down the corridor. To her I stated my conclusions.

"And I've no doubt at all," I finished, "that Annie has simply been frightened into silence."

"Well," responded the nurse, "we shall certainly settle *that*. But first we'll have to prove it. Do you think they're apt to come again today?"

"Yes," I replied, "I do. I know them, and I know their habits. That's why I came early today. Isn't there some place where we can hide, to watch?"

It was easily arranged. A large screen stood near the door, and behind it we concealed ourselves. We had not long to wait, for in a few moments, stealthy footsteps were heard in the corridor, and Annie's two older brothers, aged ten and eleven, could be seen through the cracks in the screen to advance cautiously to the door, and thence into the ward. We heard them tip-toe to Annie's bedside, and speak to her in low tones.

"Y' got any more gum like y' had yistiddy?"

"Or any more candy?" the other brother forgot caution in his eagerness.

Annie's answer was not intelligible—even her frightened sob was quelled instantly by the young highwaymen. Then for a while, there was silence, except now and again a choking sound, as though Annie were trying hard not to cry aloud; and we guessed that the marauders were rifling her treasures for whatever they might find to suit their fancy. Then Annie's voice.

"Pleathe," she wailed despondently, "I'll give you whatever Thanty Clauth givth me, if you'll only leave 'em alone. Pleathe!"

"Annie was singing a lullaby."

"Shut up!"

And Annie "shut."

For another minute or so, the pillaging continued. Then one of the brothers spoke.

"You dast to tell on us, an' we'll break your other arm!"

"Yes, an' we'll break the one what's already broke," threatened his second.

A moment later, a creaking, as of floor boards being cautiously trod, told us that the young pirates were returning. We waited breathlessly until, as they passed the door, we bore down upon them, the nurse clutching one, cat-like, by the nape of the neck, while I grasped my prisoner in powerful embrace. To the office we led them, dragging, resisting, kicking, but all the while maintaining a discreet silence.

"We let them go in, of course," the office girl told us, "because they said they were coming to visit their sister. But now they can, of course, no longer be admitted. We shall see to it," she addressed herself severely to the boys, "that you boys don't get into the hospital again."

The two miscreants apparently took their lesson to heart, for their visits ceased. Nevertheless, in the background of my concern for Annie, lurked an apprehension that I could not be rid of. I knew those boys too well to be convinced that a mere scolding from the nurse was sufficient to alarm them. But Annie lapsed once more into her former state of blissful peace. Her faith in the hospital and all its attendants was perfect; they had reassured her; then why worry?

Finally came the day of the Christmas exercises. How Annie's bright eyes sparkled when I related every detail!

In my own heart, I was making plans for Annie's Christmas. The kindergarten tree, with all its decorations, should be removed from the schoolroom to the hospital. And there Annie should see it. I divulged as much to the nurse.

"That's very thoughtful," she said, in her tactful way, when she had heard me, "but it won't be necessary. This ward is always provided for, with a large tree, and plenty of toys. Some girls' club, I believe. They are given the ages of all the children in the ward, and they prepare suitable toys."

But I was not convinced. As for the tree, very well. But one thing I was unwilling to trust to luck, or the choice of a girls' club. A doll, I would select myself. It would be reasonably safe, I felt, if it escaped the clutches of the rapacious brothers. At least, it would be too old to be saleable, by the time Annie could leave the hospital.

The night before Christmas, I entrusted a large package to Annie's nurse. Directing that it be given to Annie on Christmas morning with the other gifts she would receive, I left, after promising Annie that I would certainly direct Santa Claus to the hospital.

That night my thoughts kept reverting to Annie. Would the boys get in? Would they steal the doll? It was such a pretty doll! Annie, I knew, would love it. And above all, it had eyes that opened and closed. Annie's greatest delight was a "sleepy doll."

As early as possible on Christmas morning, I slipped away from my own festivities, to go to the hospital. I must be assured that Annie's doll was safe. A block from the hospital, as I alighted from the street car, I stopped in amazement to watch two young scoundrels, undoubtedly Annie's brothers, running at top speed down the street. In a moment they had dodged around the corner of a building and were out of sight. But the momentary glimpse had been sufficient to strike horror to my heart. In breathless anxiety I rushed to the hospital, and up the flight of steps, almost colliding with the hospital janitor.

"Did you see them?" I cried, "the boys? Annie's brothers? Were they here?"

"Yeah!" grunted the janitor, with huge satisfaction. "I seen 'em—and I settled 'em! They was climbin' in through a window in the hall—and I just happened to see one hand stickin' over the edge of the window sill as I went by. So I waited behind a door, real cautious, t'see what'd happen. 'N when they both got half way through the window, I stepped out from behind the door, an' I grabbed 'em! An' I give 'em the whalin' of their lives!"

"Then they didn't get in to bother Annie?"

"Naw," replied the janitor, as he spat with careful aim through an open window, "they did *not!* An' I'm thinkin' they won't be tryin' it again."

I left the janitor, and hurried down the hall to Annie's ward. All up and down the corridors rang the joyous clamor of celebration. Snatches of Christmas carols reached my ears. And when I arrived at the door of Annie's ward, I discovered Annie literally surrounded with toys.

But, unheeding the playthings about her, Annie was singing a shrill lullaby to *two* dolls clutched tightly in her one good arm. I stared at them in astonishment. Alike in every detail, their eyes even closed to the same degree, as they reclined in Annie's embrace. One was the doll I had given her. The other, undoubtedly, was the gift of the girls' club.

"What a shame," I thought, "Annie must be disappointed that they're both alike."

Looking up, Annie saw me standing in the door. Her eyes lighted, and she stopped singing.

"Oh, Mith Thampthon," she cried, "Thanty brought me twinth!"

Then, remembering her duty to her children, she softened her voice. "Sh-sh," she admonished, "They're almotht athleep." And she continued singing the lullaby.

Fooling the Fat

How "Slendaform" Reduces the Pocketbook

ARTHUR J. CRAMP

HOPE springs eternal in the fat woman's breast. Next to the bald-headed male there is no one quite so optimistic or with such an abiding trust in the verity of printers' ink as the obese female. Hence, the perennial popularity of alleged hair-growers and fat-reducers.

It would be unfair to say that all fat persons eat too much and take too little exercise, but it is certainly true that the most of them do—as do, also, for that matter, many who are not fat. And it is the overfed, underexercised individual who thinks that somewhere there must be a panacea that, without effort or self-denial, will transform what the corsétières euphemistically call "stylish stouts" into "boyish-form" lissomeness. The wish is father to the thought. Hence the shrewd individuals who put out antifat preparations always stress the claim that, when using their preparations, it is unnecessary to diet and an utter waste of time to exercise.

One of the latest alleged cures for obesity whose advertising appeal runs true to type is a product with the alluring name "Slendaform."

Here are some of the modest claims made for Slendaform:

"Slendaform Reduces Without Dieting, Without Exercising, Without Drugs, Without Internal Remedies."

"Just Gently Pat or Rub It In."

"And You Can Watch Yourself Grow Thin."

"Reduces any Desired Part of the Body."

"It has proven Infallible."

"Was achieved after years of constant experiment and research by a noted Obesity Specialist now practicing in New York City and who had been using it in private work for the past sixteen years with results in every case."

"The secret properties of Slendaform causes an immediate and beneficial change in the fat cells, redistributing the oily part of the fat and releasing the water which is carried away through natural channels of circulation."

"Slendaform reduces by oxidizing abnormal tissues. It actually Melts Away the Fat."

In a booklet giving directions for the use of the product, obese women (it seems to be exploited chiefly to women) are told how to take inches off abdomens, remove double chins, eliminate fat ankles, slenderize the waist, trim down the neck and reduce fat arms.

Have you a fat abdomen?

"Pat it briskly, using the palm of the hands until entirely absorbed. Repeat this several times. Then dust the skin with talcum powder. This constitutes a treatment."

Does your double chin cause mental anguish?

"To reduce double chin apply a small quantity of Slendaform evenly over the chin, pat it in gently with an upward motion (toward the ears) until entirely absorbed . . . Use Slendaform until the double chin has entirely disappeared."

The artless impudence of this closing sentence is hard to beat. Should the ladies with double chins but follow the instructions, stock in the Slendaform Corporation would surpass government bonds as an investment.

Are you built on the lines of the Georgian Period? Have you fat ankles?

"No longer is there any need for having ankles of natural grace hidden under awkward rolls of fat . . . Start with the great toe and work toward the ankle, keeping the fingers moist with dippings of Slendaform and rubbing briskly with short, light strokes . . . On the ankles work briskly upwards . . ."

Have you lost your waist line and are your curves in this locality convex rather than concave?

"The rolls of fat on the hips are more than ungainly, they are positively injurious . . . Such rolls of fat are easy to reduce with Slendaform. Apply a coating of the cream over the fatty parts, putting more where the fatty tissue lies."

And, of course, continue to use Slendaform

A new sure way to reduce
A sensational discovery that makes fat dissolve wherever applied
Not dieting
Not appliances
Not medicines
Marvelous formula removes superfluous fat anywhere on the body—results commence with the first application—a tape measure proves it—complete satisfaction guaranteed or we refund your money—an amazing offer.
Not exercising
Not bathing
Not electricity
Slenderize with
SLENDAFORM
Read what people say:
Simple home treatment
Investigate at once
Away with hateful fat?
The Slendaform Corporation
Model the fat away as a sculptor models clay

Photographic reproduction of a full-page newspaper advertisement in colors; the original was fourteen inches wide by nineteen inches high. The concern also carried full-page advertisements in several magazines of national distribution. The vast sums thus spent are provided by trusting women who hope that, by dabbing on this mixture, they may reduce their weight and still continue to overeat and underexercise.

until the barrel-shaped waist more nearly approximates the hour glass.

Is your neck too fat?

"Now that Slendaform has come, shoulders which have been burdened with drifts of accumulated fat can be made to merge again in graceful shapeliness."

Pat it on and watch for the fat to "melt away" and the neck to become swan-like. But hold! Danger ahead:

"Judgment should be used that not too much fat be removed. While there is no prospect of this happening in a single application, it is possible that if time after time you have applied Slendaform in one place, depression might be created."

One can but stand aghast at the preposterous foolishness of it all. Is there any hokum too raw to feed the fat? It would seem not when the Slendaform Corporation can afford to pay for full-page advertisements in metropolitan newspapers and women will pay $5 for a half-pound jar of this nostrum. What is the stuff? This question was put up to the Chemical Laboratory of the American Medical Association. The answer follows:

Laboratory Report

"One original package of Slendaform was submitted to the chemical laboratory for examination. The glass jar (capacity eight ounces) contained an imperfect emulsion; after remaining unagitated for some hours, a supernatant yellow stratum appeared. The odor was that of oil of turpentine, perfume and acetic acid. The following quantitative data were obtained:

Ash	0.3 per cent.
Residue (mostly casein)	10.6 per cent.
Oil of turpentine	44.0 per cent.
Saponifiable oil	0.05 per cent.
Acetic acid (calculated as absolute)	3.0 per cent.
Water (by difference)	42.4 per cent.

"According to the analysis, the product is a liniment consisting of essentially 10 parts of casein (used as an emulsifying agent) mixed with approximately 50 parts (by volume) of oil of turpentine, 10 parts of acetic acid, U.S.P. (36 per cent.), and 30 parts of water, containing added perfume and coloring. The small amount of saponifiable oil present is probably an impurity (fat) in the casein."

It should not be necessary, although probably it is necessary, to say that there is no substance known which, applied to the surface of the body, will reduce the weight. The Slendaform mixture is essentially similar to a liniment devised by a quack who flourished more than a hundred years ago, St. John Long. Quack Long used egg albumen for emulsifying in place of casein (dried milk curd). Those who wish to produce a mixture essentially similar to Slendaform, can do so by purchasing one-fourth pint each of oil of turpentine and commercial vinegar and mix. While this will not form an emulsion the mixture can be shaken just before using. At an expenditure of a few cents, one can get an amount of material equal to that of a $5 jar of Slendaform and every whit as efficacious in reducing weight.

Slendaform's astounding piece of quackery will flourish until the static force of experience has taught its lesson and overcome the kinetic power of the advertising. In the meantime, the obese public will have spent thousands of dollars to learn that the claims made for this nostrum are as false as they are silly. Our present laws seem helpless to protect the gullible. Such concerns are shrewd enough to make no fraudulent claims on or in the trade package—and it is the claims on the package only over which the National Food and Drugs Act exercises any censorship. Instead, the public is misled by the false statements confined to those avenues of publicity that the federal law does not touch—the advertisements. Once more it becomes obvious that Mr. Barnum had barely skimmed the surface of possibilities.

What Does Your Baby Put in His Mouth?

CHEVALIER JACKSON

THE statements in the box below may seem strong, but in support of them I need only say that scarcely a day passes but that some innocent little child is brought to the Bronchoscopic Clinic, Philadelphia, dangerously ill because of a mother's carelessness—not wilful carelessness, not stupid carelessness—but carelessness that comes from lack of knowledge. For years I have been saying, "Poor little baby, why was Mother so careless!" I have talked to the respective mothers, and no similar carelessness is likely ever again to happen in their families. My co-workers all over the country have insisted that this matter of prevention should be carried further, and that there should be given the widest possible publicity to the dangers of children's swallowing foreign bodies, and to methods of preventing them from so doing.

Peanut candy is often fatal to babies.

Watermelon plus a mother's carelessness has killed many a child.

Safety-pins have killed more babies than have firearms.

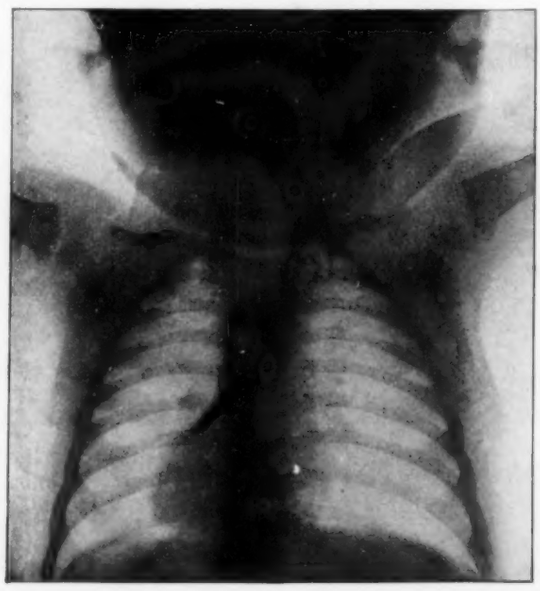
Small toys are fraught with danger to small boys—and to small girls.

A button box is a dangerous plaything for children; so is a string of beads.

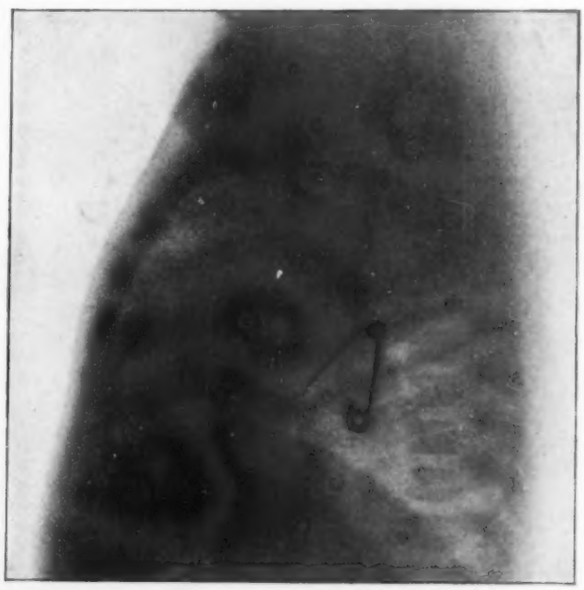
Accidents Are Frequent

The frequency of foreign body accidents is much greater than is realized. If any newspaper reader will watch, he will find that scarcely a week goes by without note of one of these cases, which are often immediately fatal; and it must be remembered that relatively few cases, only those which are most spectacular, get into the papers. The best accurate information I can give is a statement of the number of cases of certain types of foreign bodies that have been treated in a single clinic with which I am connected. Similar clinics are maintained in all large and in many of the smaller cities of the country.

The causes of foreign body accidents are chiefly various forms of carelessness, as will be seen by a glance at the summary. Next in importance, in children, is imitation. Imitation, however, is not the only cause of a baby's putting things in his mouth. It must be remembered that a child comes into the world with his mind a blank. He has to learn what things are hard and what things are soft; whether certain things are rough or smooth, hot or cold, sweet or sour, edible or inedible. One of the chief ways of acquiring this knowledge is by the experimental method of putting in his mouth the



A roentgen-ray illustration showing a baby pin in the lung of a baby nine months old. The pin accidentally fell into the mouth of the child.



A safety-pin lodged in the esophagus of a baby. The mother, while holding a pin in her mouth, thoughtlessly placed others within reach of baby.

various objects within reach. Some babies are of a more investigative turn of mind than others, but all have to be watched in this connection.

Safety-Pins

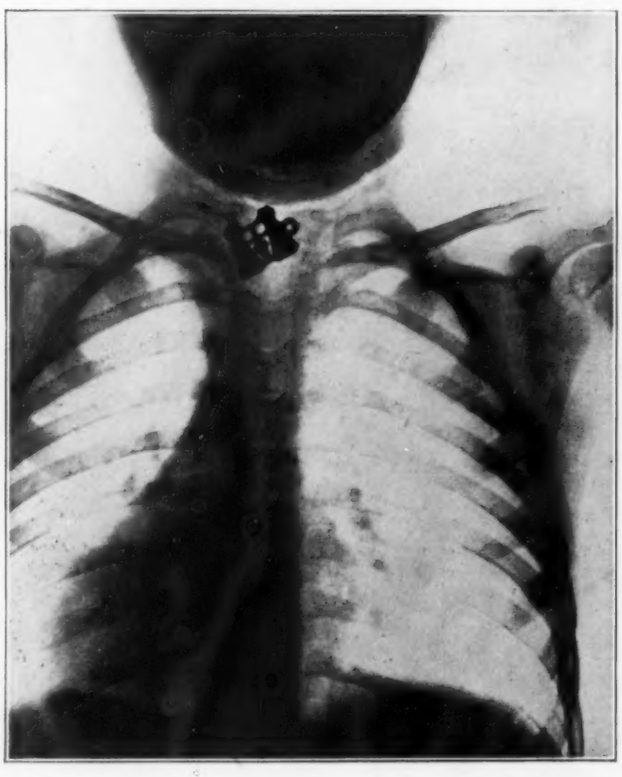
Some people may not think their babies are descended from monkeys, and I am not here to argue that question. It is not necessary to do so. All will agree with me that imitation is a characteristic trait of the monkey and that a conspicuous trait of all children is the tendency to imitate their elders. That is as far as we need go. When a mother, in changing her baby's clothes, holds one pin in her mouth and lays others down within the baby's reach, she is unwittingly, but none the less effectively, teaching that child to put safety-pins in his mouth. As material evidence of this we have at our clinic nearly a hundred safety-pins that we have removed from the lungs, throats, and stomachs of patients, mostly babies. Questioning has almost always revealed the fact that the mothers were in the habit of holding safety-pins in their mouths. Hence mothers and nurses should be taught not to set the baby a bad example by putting safety-pins in their own mouths, and above all things to keep safety-pins out of the reach of babies and young children. This applies quite as well to other kinds of pins, as shown by the collection of more than a hundred that we have removed at the Bronchoscopic Clinic.

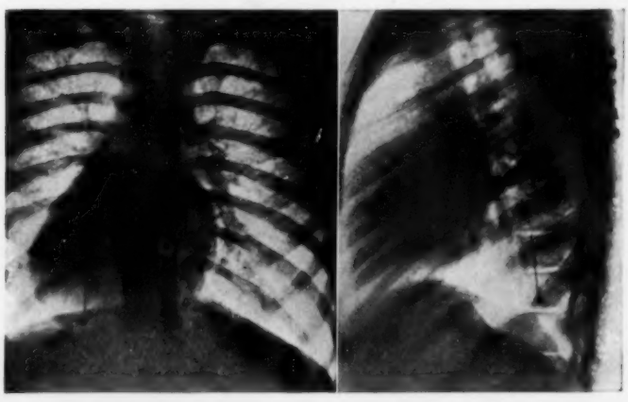
Tacks

We have dozens of tacks that we have taken out of the lungs. Most of them are of the brass-headed type, which seems particularly attractive to children as a plaything to put in their mouths. Nails, screws, and other articles of hardware are also plentiful in our collection. Obviously it is careless to allow children to put such inedible articles into their mouths.

Peanuts

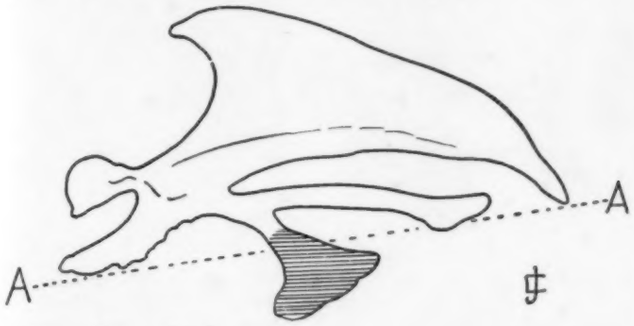
I am not a specialist in the treatment of children's diseases, and cannot tell you the exact value of peanuts as an article of diet for children; so far as I know peanuts have a certain food value, and a place in dietary consideration. But if a baby under two years of age, and hence without molars, gets a piece of peanut into the mouth, he cannot masticate it. There are only three things he can do: spit it out; swallow it whole; aspirate it into the lungs. If he spits it out well and good; if he swallows it whole, it will pass through undigested; if he chokes on it, as is very likely, he will aspirate it into the lungs. In the last case, he will, in a few days, be a dangerously sick child, because the peanut, or any kind of true nut kernel, is peculiarly irritating to the lungs when inhaled into the windpipe or bronchi. If it is desired that a baby who has no molars shall have peanuts, they should be given in the form of peanut butter. But whether or not this would be proper food for a baby is a question for the baby specialist or family physician to decide. One of the most common ways for a baby to get a piece of peanut kernel into his lung is from peanut candy. Parents often do not realize that after the candy dissolves there is left the nut kernel, upon which the baby is very liable to choke. The choking is followed by a deep inspiration, and down goes the fragment of nut kernel into the baby's lungs. Other nut candies are equally dangerous, but are not purchased so frequently, and



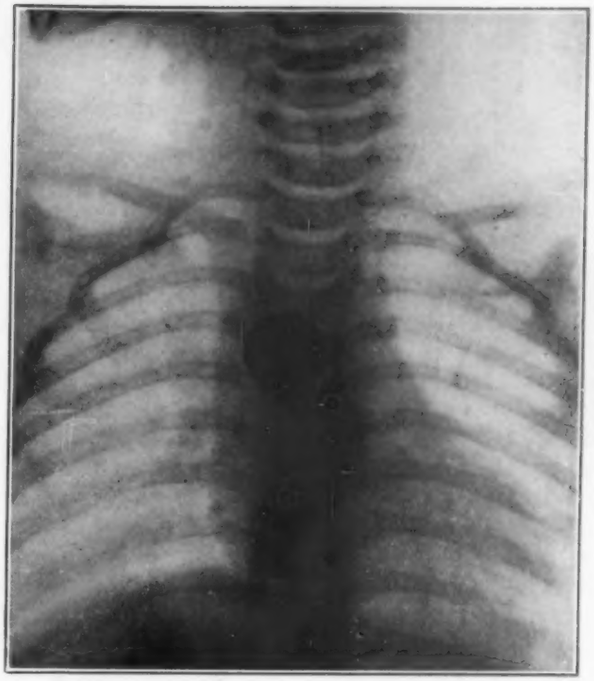


Toy opera glasses lodged in the gullet of a child four years old (at the left). He should not have been allowed so small a toy.

Shawl-pin in the lung of a girl ten years old. She had followed the example of her mother and had held it in her mouth.



Drawing of breast bone of a chicken. The shaded portion is easily broken off and is the most frequent of bone fragments to lodge in the throat.



This coin (a quarter) lodged in the gullet of a child who had been carelessly allowed to play with it and hold it in his mouth.

for this reason fail to figure prominently in the statistics of our clinic.

Toys

Small toys such as jackstones, whistles, and tiny animals, are well represented in our collection of objects removed from the throat, stomach, and lungs. Babies should never be allowed to play with such things, and older children should be taught not to put them in their mouths. We have also in the collection small parts detached from large toys. For instance, we have half a glass eye from a teddy-bear; the eye had broken, and this piece remained dangling by a thread. All toys should be inspected for loose parts before they are given to young children.

Seeds and Kernels

Grains of corn, beans, peas, canna seeds, coffee beans, and similar vegetable substances we have removed from the lungs of more than one hundred children. In almost all instances the dried grains of corn and the like were being used by the children as toys, not as food. Watermelon seeds, of which we have taken many from the lungs of children, were sometimes being used as toys, but more often they were inhaled by the child when it choked while eating a piece of melon. It is very easy to remove the seeds from melons, and this should always be carefully done before serving them to children.

Buttons and Beads

Buttons, beads, and jewelry we have found lodged in the throat and lungs of more than a hundred children. These things should never be given babies to play with, and older children should be taught not to put such inedible and dangerous objects in their mouths. If a string of beads breaks, the danger is as great as if loose beads were given.

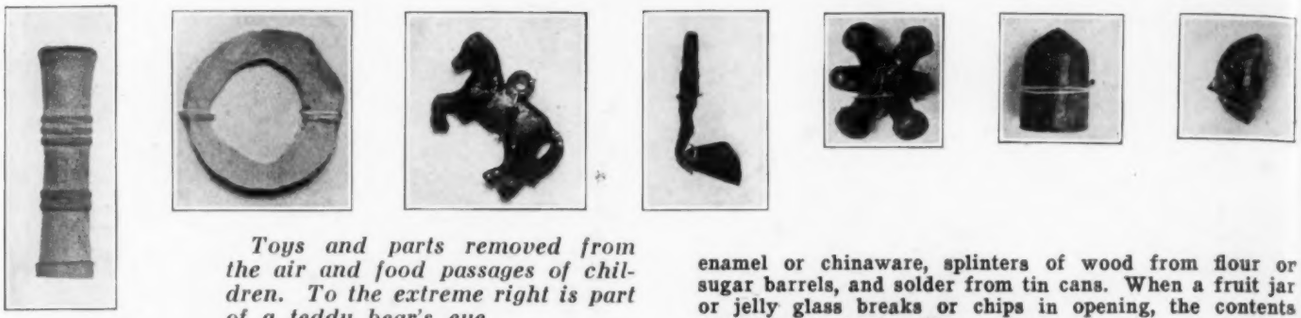
Coins

Coins are represented in our records by more than one hundred and thirty cases. Women may be seen in the street cars holding coins in their mouths, yet very few women have come to the clinic with coins stuck in their throats. Their bad example is followed, however, by children, in whose throats we do find the coins. In some cases a coin has been given a baby for a teething ring, or the baby has put it to that use. Teething rings of any kind are condemned by most physicians and dentists, I believe; but apart from that, coins are filthy things to put in the mouth, as anyone may determine for himself any day by watching the hands that handle coins in a busy city. And then there is the ever-present danger of the coin getting stuck in the throat.

Bones

Bones have been known as objects liable to stick in the throat since very ancient times; they were mentioned in this connection in Esop's Fables and in the ancient ecclesiastic annals. We have more than one hundred and fifty specimens in our collection that have been removed from the throats and lungs of patients of all ages.

Good manners as well as good health require that food be taken into the mouth in small quantities, and good health requires that thorough mastication be given all food. If these fundamental rules were observed, bones would be rare instead of common as foreign bodies lodged in the lungs, throat, stomach, and intestines, because during slow mastication bones in the food would be detected before they could get too far back for removal. Once they reach the back of the tongue, it is usually too late for rejection. Wearers of artificial dental plates need to be especially slow and careful in eating, not only because



Toys and parts removed from the air and food passages of children. To the extreme right is part of a teddy bear's eye.

mastication is less efficient under such conditions, but also because a dental plate that covers the roof of the mouth diminishes by nearly half the sensitive area that normally would detect bones in the food. Watchful eating would prevent the intake of bones. Eating without glasses by those who need glasses for reading, is often an avoidable cause of overlooking bones in food. Hasty eating, a form of carelessness, is the most common fundamental cause.

Dental plates, if not kept in perfect repair and fit, may themselves come loose and lodge on the way to the stomach. Every wearer of a plate should see his dentist at once in case it becomes damaged or ill fitting as a result of changes in the mouth.

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1. Analysis of the causes in 1,135 cases of foreign bodies in the air and food passages shows that in nearly 90 per cent. the presence of the intruder is due to easily avoidable carelessness:

Carelessness in the preparation of foods.
Carelessness in eating and drinking.
Carelessness in putting inedible objects in the mouth.
Carelessness of parents and nurses.

2. Foods for children, invalids, and aged persons should not contain such things as bones, watermelon seeds, orange seeds, lemon seeds, grape seeds, cherry, plum, prune, or peach pits, or stems of fruits.

3. Foods other than fish or birds should not be served, even to normal adults, with small bones. Fish and birds should be eaten with the utmost care as to the bones.

4. It is careless to serve food containing fragments of nut shells, egg shells, oyster shells, crab shells, and so forth, and to permit containers and utensils to contribute to the food such fragments as of egg-beaters, chips of enamel or chinaware, splinters of wood from flour or sugar barrels, and solder from tin cans. When a fruit jar or jelly glass breaks or chips in opening, the contents should be strained or thrown away.

5. Care should be taken when cooking or serving food to see that there are no loose pins or buttons in the waist that could fall into the food.

6. Hasty eating and insufficient mastication should be avoided as dangerous.

7. The chewing of pencils, toothpicks, grass stalks, straw and the like, apart from the general objections, is a cause of foreign body accidents. Pencils are filthy things to put in the mouth anyway.

8. Children should be taught not to put inedible substances smaller than a spoon in their mouths.

9. Coins are filthy things to put in the mouth, and may get lodged in the throat. Teething rings are objectionable, but a coin as a "tooth cutter" is worse.

10. It is careless to allow a child to run or jump with anything, even food, in its mouth.

11. Babies should not be put on the floor to amuse themselves until after the floor is cleared of all small objects, such as tacks, seeds and bits of coal.

12. Children's toys should be inspected for small loose parts, such as eyes, buttons, fragments of metal, and wood.

13. Babies should not be allowed to play with corn (maize), coffee berries, seeds, small marbles, jacks, and the like.

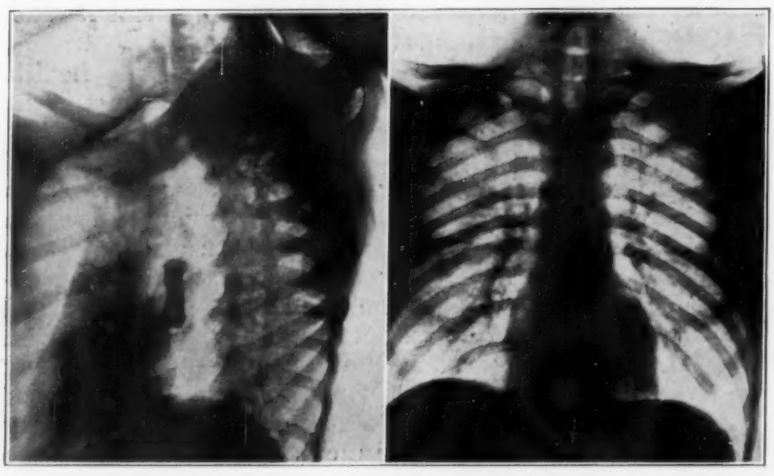
14. Children under two years of age should never be given peanuts, peanut candy, or any other kind of nut candy. They cannot chew the nuts, and are liable to choke on them and aspirate them into the lungs.

15. Don't set a bad example to a baby by holding a straight pin or safety-pin in your mouth.

16. Don't bend over a baby or take it in your arms without making sure that there are no pins, needles, safety-pins, buttons, or jewelry in your waist that could get into the baby's mouth or reach.

17. Artificial plates should be kept in good repair and adjustment, and, no matter how well they fit, should always be removed, not only before anesthesia, but also in case of delirium, coma, semi-consciousness, unconsciousness, severe shock, and intoxication, and before sleeping, or even dozing.

18. If you see a foreign body on the tongue, take it out; but if it has gone down back of the tongue, don't try to reach it with your finger. Send the patient to a physician.



This roentgen-ray illustration shows artificial teeth lodged in the gullet of a man who had carelessly neglected to have the broken plate repaired so that it would hold securely. Every wearer of a plate should see his dentist at once in case it becomes damaged or does not fit.

Crippled Boy Is Cut-out Artist

JOE JONES is whistling as he lies a prisoner in the bedridden ward of the Masonic Home for Crippled Children in Atlanta, Georgia.

Although he is strapped tightly to his hospital cot to prevent the slightest injurious twist to his head, he has found an occupation that keeps him cheerful.

Underwood & Underwood

Joe Jones is an artist. He doesn't paint sunsets or portraits, for that cannot be done from a reclining position, but he pursues his own brand of art and is coming to excel in it.

For several days after Joe came to this spacious hospital erected in Atlanta by the Scottish Rite Masons for the free treatment of crippled children whose parents could afford for them neither medical nor surgical care, he lay bound to his bed with nothing to amuse him.

Although his crippled childhood had prevented attendance at the public school, he had been taught at home to read, but it is difficult work for weak and slender arms to hold a book aloft, nor is it good for the eyes to read when lying down. So Joe could not enjoy books greatly and other methods of amusement soon grew tiresome, until one day he discovered his forte.

A pair of blunt scissors and a supply of old cardboard changed the complexion of Joe's days. It wasn't long until Joe's ward had become a zoo in which pasteboard lions and pasteboard lambs lay down together, as if in fulfilment of the old biblical prophecy.

And so Joe Jones now whistles as he pursues his art. His Noah's ark collection still grows, and new animals enter, not two by two, but one by one, as fast as Joe's busy scissors can snip them out.

So expert has Joe become in producing silhouettes that it requires no imagination to interpret his various characters, some of which are shown in the accompanying illustration.

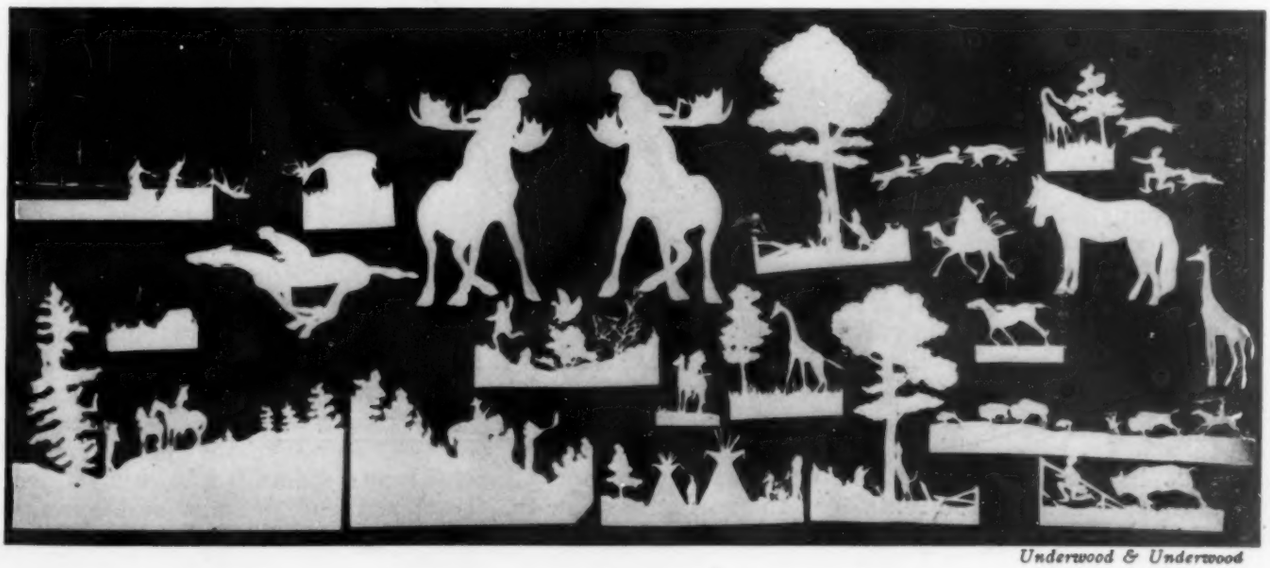
In the upper left corner, Dempsey has just delivered a left upper cut to the jaw, and the exhausted Firpo is being knocked through the ropes.

Zev, in another cut-out, is taking the home stretch, with Papyrus, the English Derby winner, so far behind as not to appear in the scene.

Who rides the speeding camel through the desert sands, but our old friend "The Sheik of Araby."

A Spanish gladiator is beating ignominious retreat from an enraged bull; an early pioneer gives chase to a herd of buffalo; Chief Sitting Bull stands silent beside his tepee.

Joe Jones, you see, has imagination as well as skill.



Underwood & Underwood

Kadel and Herbert

A real playmate is the best.

"I won't! I won't!! I don't want that!" Tears and screams and fits of temper are not the natural course of events with children, according to Dr. Abt. If your child is hard to manage, nervous and irritable, find out who is at fault.

The Nervous Child

ISAAC A. ABT

THE tendency to nervousness may be inherited or acquired. The offspring of parents with lack of nervous and mental control show symptoms of nervousness in earliest infancy. They are restless whether awake or asleep, and are easily startled. They often cry both before and after feeding, and frequently fail to gain in weight. Many show an aversion to food with consequent disturbances of nutrition. Usually they have an uneven temper.

Aside from the hereditary influence that parents transmit, the environment that they create is a potent factor in deciding the character and the nervous stability of the child. Environment is the atmosphere in which the child lives. Unconsciously he acquires habits, lines of action, and modes of thought from his surroundings. In the development of his character, example and imitation are powerful factors.

The so-called nervous child is frequently an untrained child of untrained and weak parents. It has been estimated that 50 per cent. of the nervous children belong in this group. The children may be overstimulated by excessive attention, as by rocking or coddling.

Mother's Attitude Important

The young, inexperienced mother is frequently confused by her task. Her new responsibility may make her extremely nervous. She shows anxiety if her baby does not sleep, or she becomes frenzied if he does sleep. She overclothes him lest he catch cold. She picks him up the moment he cries. She paces the floor with him or sings to him or rocks him. She fails to feed him with regularity. In short, she fails in the normal training process.

The most characteristic feature in the mental life of the young mother is her anxiety about the new-born baby. Anxiety may be so far advanced that her judgment becomes unsound and her fears constitute an abnormal nervous condition. Such a mother may imagine that her child is suffering from an incurable disease. She thinks that she is unable to bathe the baby. She fears that he will drown in the bath or catch cold. She is afraid to take his temperature for fear of injuring him. She bundles him up unnecessarily. She reads carefully one of the numerous books on the care and feeding of the baby and becomes greatly exercised if he does not gain in accordance with the printed chart. If the baby's behavior does not correspond to the descriptions in the text-book she is alarmed. Because of her unstable nervous condition she asks and receives suggestions from numerous friends and relatives. She becomes more and more confused and fails to carry out a normal routine in the care of the infant. Even the physician's orders are neglected or misunderstood. This confusion on the part of the mother disturbs the normal life of the infant, who reacts by becoming nervous.

The Danger of Too Much Attention

Infants and young children frequently suffer from the attention showered upon them by the parents, numerous friends and relatives. They are picked up, hugged, kissed, caressed, shouted at, sung to, exhibited to friends and neighbors by unthinking parents until the babies show symptoms of nervous exhaustion.

The young child has a natural tendency to imitate the acts of the adults with whom he is constantly associated. The varying moods of the parents, their sorrows, joys, gestures, and manner of speech—all make an impression upon the child and he imitates them unconsciously. He learns by precept and example. His first lessons come to him in the home.

If the home is calm, cheerful and tranquil, the child is happy and evenly poised in his mental and physical life. If, on the other hand, the home is chaotic, and the parents given to undue emotionalism, the child loses the finer balance of body and mind and he becomes nervous.

Kadel and Herbert

Let them laugh together. Simple games and companions teach a child to be courteous to others.

Children are very susceptible to impressions received from external sources. This is particularly true of those in runabout age. Conversations which involve the conduct of the child are frequently carried on in his presence. He hears that he will not eat certain things. It is also mentioned that the father, for example, dislikes the same foods. The subject then reverts to the physical health of the child. He learns that he is delicate or that he is naughty. The mother may proudly tell the tale of some childish prank, perhaps at great length; or tell a story of grief, sadness and remorse. Again, she may discuss her feeling of offense or her sense of injustice in the presence of the child. He may hear stories illustrating jealousy or anger. All matters which refer to trouble and grief depress the child. They suggest unhappy trains of thought and produce nervousness. Sometimes the evils of suggestion are brought about in a more direct way. The child is told that he looks bad. He is asked if he is ill, if he feels pain. Any one of these numerous questions suggests illness instead of health.

Don't Make a Child Feel Inferior

Not infrequently children are impressed with the idea that they are inferior. These children usually become completely dependent upon others—weaklings who fail to develop any sort of independence. Everything is done for them by a willing mother or nurse. Every want is supplied. Every wish is anticipated. The child is applauded for everything he says and does and his cute acts are related to friends in his presence. When the child goes to school or mingles with other children, he no longer receives this amount of attention, consequently he feels hurt and inferior.

Parents are sometimes to blame for this feeling of inferiority. I recently overheard a mother tell her ten-year-old nervous boy that he was not as active as his six-year-old brother, did not have the endurance of his brother, other boys took advantage of him and overpowered him physically. He was bright mentally, read voluminously, but had no physical endurance. He was weak and delicate, she said. When this child was away at school he was active and played enthusiastically with the other boys. But at home he unconsciously assumed the rôle of an inferior weakling which his mother insisted upon assigning him.

Children Imitate Parents

In the first years of life we have no one to imitate but our parents and thus they become our ideals. The normal child who imitates both parents, or the parent of his own sex without being hostile to the other parent, and who eventually comes to imitate persons outside the family circle, will build up a normal and original personality. This condition, unfortunately, does not always prevail. Children frequently are influenced by one parent more than the other. The nervous parent with perhaps a more colorful personality may attract the child more than the normal parent. If there is not perfect accord and harmony between his mother and father the child becomes emotionally confused, uncertain in his

Kadel and Herbert

Santa Claus, typifying the reward of goodness and kindness, should be a familiar figure in the mind of every child.

allegiance, and eventually is a victim of abnormal emotional states, conflicts, repressions, and general nervous abnormality.

Reading improper stories causes mental confusion and excitement. Some stories stimulate undue emotion, excite unwholesome imagination, cause dread and fear, and suggest thoughts which are ordinarily outside the range of the child's mental processes. Not infrequently the authors are themselves nervous and create morbid situations which depict misery, suffering, and sin. The impressions which the child receives from such books inevitably produce abnormal mental states.

The child's toys should be simple. Elaborate and complicated playthings teach him extravagance and selfishness and he soon wearies of them, becomes discontented, and demands the excitement of new ones in increasing number and variety. Blocks, dolls, a ball or a bat are more suited to the child's mental and physical development.

Avoid Fright and Fear

Fear is a part of normal childhood, but it may be abused for discipline. The child is told that the policeman is coming; he is threatened with the chimney sweeper or the bad man who takes away disobedient children; he is warned against Old Bogey, the man-eater, bears, lions, wild animals that eat bad children, and the doctor who wants to cut out the child's tongue. This explains why some children cry when the doctor comes, and the shrinking, run-away feeling they have when they meet a policeman. Fear jars the nervous system and the effect may be felt for a long time. Great fright, such as occurs when a child is attacked by a dog, sees an accident, or hears the details of a tragedy, causes a commotion of nerve structure and may result in what is called psychic trauma (mental wound). The effect upon the child depends upon the stability of his nervous system and the intensity of the shock. Just as one would protect a child against physical wounds, such as a blow or a fall, so one must protect him against mental wounds.

Sensible training may correct the nervousness in a child who has an hereditary predisposition. A child who is originally not nervous may become so if the training is improper. Good training should prevent the occurrence of nervousness. The method of such training consists in regulating the conditions of the child's life, in harmoniously developing his body and mind and in eliminating unsuitable factors from his personality and environment.

There may be lack of self-regulation, particularly in children who are unduly bright and precocious. Children who are thought by the parents to be extraordinarily gifted are frequently those who lack development of feeling and of will. Parents are frequently at fault in the management of these children. They look up to them with admiration and defer to them in many respects.

Precocious children not only frequently lack feeling, but they are egotistical, self-willed, and have poor moral judgment. They object to playing with children of their own age and seek the society of adults. Children should be discouraged from exclusively seeking the company of adults. The unfavorable influences of adult surroundings is best noted in the case of the "only child," who is usually precocious and has a number of nervous symptoms. These nervous children should be placed in school with children of their own age; public schools are better adapted to their needs than private schools, where there are already many children of the precocious, nervous type. The school exerts a leveling influence; it demands regular and uniform working hours and control of the attention and of the will. The nervous child learns to control his attention and, in the calm impersonal atmosphere of the schoolroom, he learns to restrain many impulses to nervous outbreaks to which he would ordinarily give vent. It is important that children should mix freely with normal companions not only in the schoolroom, but also on the play-ground. Nervous children, on account of their egotism and conceit, do not play freely with others unless they are deferred to. They often choose younger or weak-willed children as their playmates. Tendencies to nervousness are frequently corrected if the child can be induced to mingle with the group. The beneficial effects of this social contact is especially noticeable in the summer camps. Children have a keen sense of justice, and differentiate quickly between the normal and the exceptional child. If a child acts smart, if he is not a good mixer, if he is overbearing or arrogant, his group or the whole camp will at once set about to correct these defects.

Must Also Train Parents

Treatment of nervousness consists not only in training the child, but more truly in training the parents, the grandparents and the friends. Parents are difficult to handle. At times they seem unwilling to cooperate with the physician.

The general principles of the care of the child are too well known to require repetition. Regularity of habits should be taught first of all. Too much attention should not be showered upon him. He should be treated with disregard and unconcern. A child who has learned to take things as a matter of course and to accept things as they exist has gone far toward safeguarding a healthy nervous system. For the infant, discipline consists in regular feedings of the proper quality and quantity of food, providing proper clothing, and eliminating coddling and rocking. In some instances the

(CONTINUED ON ADV. PAGE 12)

A Review of Some Books on Health

HARRY HANSEN AND MORRIS FISHBEIN

TO the layman nothing is half so important about the whole practice of medicine as the symptoms. If you have the symptoms, it follows naturally that you have the disease. The average man knows very little about schools of medicine and methods of fighting certain diseases, but he does know—thanks to the advertisements—that at forty years of age four men out of every five have—pyorrhea! When two men get chummy in the smoking room of a Pullman, and the one tells the other that he has been getting up lately with a tired, all-dragged-out feeling, no ambition, his friend will diagnose for him anything from torpid liver to tuberculosis without consultation charges. As for the enjoyment that women are able to get out of a summary of even the slightest symptoms—well, statistics are not available, and entirely unnecessary. Now every physician knows what care goes into the making of a diagnosis; how the symptoms vary with any number of individuals and point to entirely opposite conclusions; how, even with a patient before him, the physician makes use of every method known to science to meet every reasonable doubt, so that he may confidently establish the ailment. This leads us to be rather skeptical of any sweeping diagnosis of what ailed King Henry VIII, Joan of Arc, the Empress Theodora, Emperor Charles V, Samuel Pepys, Edward Gibbon and half a dozen other notable figures of history, especially when there is no corpus delicti available.

The books here reviewed are considered from the point of view of the lay reader for whom they were prepared by Mr. Harry Hansen, literary critic of the Chicago Daily News and Harper's Magazine. The medical comments—in the indented type—are by Dr. Morris Fishbein, of the editorial staff of the Journal of the American Medical Association and Hygeia.

POST MORTEM: By C. MacLaurin. George H. Doran Co., New York, 1923.

Yet this is precisely the task that Dr. C. MacLaurin, lecturer in clinical surgery at the University of Sydney, Australia, has set for himself, and performed, to some extent accurately, and again rather superficially, on these historical personages in his new book, "Post Mortem." He is working entirely from documents in libraries, and so has been able to make deductions from actual testimony about men like Gibbon, whereas he has had to generalize somewhat more freely, and on less authority, in the case of persons farther removed from us, like Henry VIII. The latter study is really called "The Case of Anne Boleyn," Henry himself, he says, had syphilis—"it is impossible to doubt that Henry contracted it in his youth." For this reason Catherine of Aragon may have been extremely unfortunate in bearing heirs to the throne. Dr. MacLaurin enumerates that Catherine had, seven months after marriage, a still-born daughter, eight months later a son, who lived three days; two years later a still-born son; nine months later a son who died in infancy; eighteen months afterward an infant who lived and became Queen Mary. "She grew up, as one can see from her well-known portrait, probably an hereditary syphilitic." This seems a bit too postmortem. Later Catherine had several more miscarriages. Dr. MacLaurin has the impression that she died of uremia, but does not hazard a definite opinion. Enter Anne Boleyn. Her child, Elizabeth, was born a vigorous infant. She had several miscarriages. "This fate, of course, was Henry's syphilis, even supposing that neither wife had contracted it independently." But Anne, he decides, was a nymphomaniac. He accepts not only the evidence brought against her on behalf of the king at her trial, but also relates that "her spasms of violent temper after marriage, her fits of jealousy, her foolish arrogance and insolence to her friends, are all mental signs which go with nymphomania, and the fact that her postnuptial incontinence seems to have begun while she was still in the puerperal state after the birth of her only living child seems highly significant." "Incidentally," writes Dr. MacLaurin, "the worry over Catherine's divorce left Henry with an arterial tension which caused great misery to England and ultimately death to himself." Thus is one man's disease likely to poison his whole era.

This is sufficient, we believe, to show Dr. MacLaurin's method. We do not agree that he has definitely established Anne Boleyn's case on the evidence produced, especially as most of the testimony against her was given in order that her royal husband might get rid of her. But Dr. MacLaurin sums up most of this evidence

fairly, and admits that there is a doubt. He then writes about Jeanne d'Arc, which seems more difficult, and the Empress Theodora, which is most difficult of all. Samuel Pepys, of course, permits more detailed medical analysis, for the reason that he recorded various disorders and ailments in his diary. Pepys had a uric acid calculus removed by the ancient methods that were used before Simpson and Lister; Mrs. Pepys, too, had difficulties—"possibly some pelvic sepsis, possibly an ischiorectal abscess." Later on more abscesses develop, and pyorrhea may have been the origin of her ailments; but says Dr. MacLaurin: "It is idle to speculate." He also finds that Jean Paul Marat's proclivity for murdering people during the French revolution was due to his diseased condition, for which he remained hours at a time in a tepid bath; "he appears to have been a paranoiac," with delusions of persecution, as well as a skin disease, possibly dermatitis herpetiformis.

> The latest sport that has added to the gaiety of nations is this attempt to diagnose postmortem, from their writings or from the testimony of others, the ailments from which the great men or writers of the past have suffered. No doubt the personal ailments of Napoleon may have had something to do with his martial difficulties and perhaps have contributed to the defeat at Waterloo. A man with a chronically inflamed gallbladder is irritable usually and may tend to become melancholy. However, it is probably the height of futility and merely a form of mental gymnastics to cogitate on the glandular enlargements or weaknesses of long dead geniuses. This is particularly true since the actual functions of the glands of internal secretion are only now beginning to be established.
>
> Such things as stone in the bladder, from which Samuel Pepys suffered, are concrete objects. The hydrocele or accumulation of fluid, from which Gibbon finally sought relief was an actual physical change; therefore it is possible to estimate what influence it had on his mental condition. There are a great many more things that will make a man irritable than the functions of his glands, and it is hardly scientific to pick on the glands without having the other factors under consideration.

HABITUAL CONSTIPATION: By Ismar Boas. Translated by Thomas L. Stedman. Funk and Wagnalls Co., 1923.

The idea that constipation is at the basis of many ills not directly traceable to this one "annoyance" has been growing among men outside the medical profession, especially since the popularization of advice on health in the newspapers. Chronic constipation is referred to so frequently in the columns conducted by physicians for the public that one may well guess that many middle-aged persons, whose diet is erratic and whose habits are sedentary, are afflicted. For them, no doubt, a book like this—"Habitual Constipation," its causes, consequences, prevention and rational treatment, by Ismar Boas, professor in the University of Berlin—has its uses. The book has been translated by Thomas L. Stedman, M.D., into "plain, non-technical English." We are interested to find that Dr. Boas makes use of the lesson taught by the war in driving home his argument that constipation is a disease of civilization, due to the "more refined dietary of our time." Thus he says: "One of the most remarkable and instructive examples of the influence of an altered mode of life was furnished during the World War in the countries where dietary conditions were essentially simplified, as in Austria, Germany, and Russia. In these countries, especially among the Russians, who were already weakened by undernourishment, and who normally suffer from constipation in high degree, the restriction to a few articles of diet, such as bread, grits, and potatoes, was followed by a marked decline in the intensity of the disease, despite the great psychic disturbance caused by war and revolution. This mass experiment further demonstrated that as soon as normal conditions of nourishment began to be restored, in Germany at least, all the former gastric and intestinal disorders reappeared in equal or greater degree, especially in those who endeavored to get back their lost flesh and to renew the pleasures of the table as soon as possible." Dr. Boas finds the prospects of a cure of chronic constipation the best imaginable. Cases of twenty to thirty years' duration have terminated in lasting cures. And he places emphasis on prophylaxis, or the prevention of constipation in childhood. Regularity, exercise, diet, are his main points. Progressing he outlines the sort of treatment to be given in all kinds of cases, up to hemorrhoids, fissure of the anus, strangulated piles, etc. Various cathartics and their effect are also described, in detail. What impresses the lay reader is the scope of the book, which apparently has no one system to advise, but aims to give the reader the best possible medical advice. What we like about it is the fact that it puts clearly the statement that the physician cannot possibly remedy the situation alone—the patient has to be a willing and active factor in seeing the remedy through.

> This is one of the most complete, simple and satisfactory books on constipation that is available to the public. Its advice throughout is sound and established on scientific fact. It pleads constantly for a

rational life and a sane diet—for prevention rather than for cure. It recognizes the value of the laxatives and the cathartics properly used: "The strong cathartic should be used only on the advice of a physician, in small doses and only for a brief period." A proper observance of the twelve simple rules for the avoidance of constipation cited in this book would do much to relieve a great many ills from which mankind now suffers.

PERSONAL HYGIENE APPLIED: By Jesse F. Williams. W. B. Saunders Co., Philadelphia, 1923.

There are still a great many persons who believe that if a girl gets the same training and exercise as a boy does she will grow up hardy and strong, and able to bear the same physical burdens. This belief may be proved after a course of training through centuries, but it is idle to expect a young woman, with her physique established by habit, environment, occupation and race, to become an amazon in one lifetime without injury. For that reason we like the care with which Dr. Jesse Feiring Williams, professor of physical education at Teacher's college, Columbia university, makes it clear in his new book, "Personal Hygiene Applied," that the sexes cannot exercise equally well in the same games. Girls should not seek to excel in boy's events, nor are those sports that are healthful for a mature girl likely to be beneficial to an immature girl. His table of sports that are condemned, doubtful, safe and especially beneficial should be kept at hand in schools and in the home. He agrees that there must be adaptation to climate, occupation and to the individual need. Dancing is to be highly valued so long as it is natural in the form of movement and done in a sanitary atmosphere. "The social dance involves fundamentally the romantic position; it is often erotic in character. Hence it should be controlled by the finest and most accepted standards that will help boys and girls to fine forms of expression." The book is of course a manual of exercise. Daily physical activity is necessary, says the author, after one passes thirty. "There is no short cut, no easy way out." On the subject of hygiene this book is detailed, and in many cases exact. The chapter on married life is written in the same manner in which the author lays down rules for exercise, and therefore seems less authoritative. We may say that in choosing a wife a man should try for similar tastes, that a man who loves the out-of-door life may well avoid marrying a woman who sits by the fire, but it is easier to say this than to cause the rule to be observed. In the latter part of the book the author gives the rules for prevention in specific diseases. Much of this is no doubt informing and valuable, but the lay reviewer is not equipped with a wide medical knowledge to judge in how many instances it is accepted by the best medical practice, and in how many it fails to meet the issue. We should say, on the whole, that this book is especially well adapted to schools and colleges and should be read also by physicians who realize the value of exercise as a factor for health.

Those who read Professor Jesse F. Williams' article in HYGEIA for September know that he writes authoritatively and well on training for health, that he is a believer in "positive health." In this book his views are cited at length. The person who wants to live a healthful life will find this book a Baedeker to guide him on the road. As Mr. Hansen rightly points out, the health teacher is inclined to provide a system of life with health as its objective, disregarding such other human functions as pleasure, and also the natural fallibility of the human will. The great panacea for all the ills that now afflict mankind is, of course, the science of eugenics, breeding for health. But until some method has been discovered for completely subordinating the emotions, men will continue to marry women subject to tuberculosis or goiter or what not, and women will choose for their mates men who bear the taint of venereal disease, or whose genealogical tree contains at least one or two branches subject to mental defect.

THE ACTION OF ALCOHOL ON MAN: Ernest H. Starling and others. Longmans, Green & Co., London.

"The Action of Alcohol on Man" is the first book we have come across that gives us a clear, authoritative interpretation of this much-discussed subject. We find on reading it that many of the arguments for and against the drinking of beer, wines and liquors are made to bolster up this or that platform. To assert offhand that whiskey is injurious is merely to support prohibition without detailed information. This book bears the names of four well-known writers. It is written principally by Ernest H. Starling, of University college, London, and three essays are appended: "Alcohol as a Medicine" by Robert Hutchinson, of London hospital; "Alcohol and Its Relations to Problems in Mental Disorders" by Sir Frederick W. Mott, and "Alcohol and Mortality," by Raymond Pearl of Johns Hopkins university. As Dr. Starling says: "I cannot pretend to foretell what will be the effect on the unbiassed reader of the evidence here presented. As regards myself, it has convinced me that in a civilized society such as ours the abolition of all alcoholic beverages from among our midst, even if carried out by uni-

versal consent, would be a mistake and contrary to the permanent interest of the race." But the value of the book is that it is not a treatise against prohibition and for the use of alcohol. In the body of the book there is no attempt to meet an argument, but to elucidate certain effects. To take a few sentences out of this fine work in an endeavor to give you a hint as to its content would be inutile and hurtful to the book itself. Dr. Starling discusses: fermentation and fermented liquors, the fate of alcohol in the body, foods, drugs and poisons, alcohol as a food, the action of alcohol on human behavior, the effects of alcohol on fatigue, the influence of alcohol on digestion, the effects of alcohol on the circulation of the blood, the influence of alcohol on respiration, the influence of alcohol on the regulation of body temperature, the effects of the immoderate use of alcohol and the influence of alcohol on the community. Even if we admit Dr. Starling's assumption, that prohibition of alcoholic beverages would be a calamity, we must remember that prohibition is largely a social reform, rather than a medical reform. None of the physicians who measure the effect of alcohol would approve the wholesale use of it in the human body. And we must recall, when we find such excellent scientific reasons for keeping alcohol in some form or other, that it is the abuse of drinking that has led to the present prohibition in America. Had America been a nation of moderate wine drinkers the present situation probably would never have arisen.

It is unusual to find an absolutely scientific discussion of the action of alcohol on man. Unfortunately no one wants to read that kind of a discussion. The prohibitionists will attack Dr. Raymond Pearl for saying that the moderate use of alcohol does not appear to have any effect on the duration of life, and the antiprohibitionists will be dissatisfied with his conclusion that the excessive use of alcohol definitely tends to shorten the life of the user. Furthermore, a strictly scientific discussion of the action of alcohol on man takes no account of the numerous social problems associated with its use in the United States. And after all it is the by-products of alcohol consumption that disturb moralists far more than any effects it may have on the body of the individual user. If we could have a similar discussion, just as scientific as this one, on the social effects of alcohol, we would be in a better position to evaluate its status.

PLUTARCH—IN THE SECOND CENTURY, A.D.

As Demades told the Athenians, who unseasonably made war, that they never treated of peace but in mourning, so we never think of a moderate and slender diet but when we are in a fever or under a course of physic. But when we are in these extremities, we diligently conceal our enormities, though we remember them well enough; yet as many do, we lay the blame for our illness now upon the air, now upon the unhealthfulness of the place or the length of a journey, to take it off that intemperance and luxury which was the cause of it.

For health is not to be purchased by sloth and idleness, for those are chief inconveniences of sickness; and there is no difference between him who thinks to enjoy his health by idleness and quiet, and him who thinks to preserve his eyes by not using them, and his voice by not speaking. For such a man's health will not be any advantage to him in the performance of many things he is obliged to do as a man. Idleness can never be said to conduce to health, for it destroys the very end of it. Nor is it true that they are the most healthful that do least.

I am not ignorant that fevers seize men upon a fatigue or excess of heat or cold. But as the scent of flowers, which in itself is but faint, if mixed with oil is more strong and fragrant, so an inward fulness gives, as it were, a body and substance to external causes and beginnings of sickness. For without this they could do no hurt, but would vanish and fade away if there were lowness of blood and pureness of spirit to receive the motion, which in fulness and superabundance, as in disturbed mud, makes all things polluted, troublesome, and hardly recoverable.

We ought chiefly to be careful in all predispositions and forewarnings of sickness. For all distempers do not invade us, as Hesiod expresses it—

In silence—for the Gods have struck them dumb: but the most of them have ill digestion and a kind of laziness, which are the forerunners and harbingers that give us warning. Sudden heaviness and weariness tell us a distemper is not far off, as Hippocrates affirms, by reason (it seems) of that fulness which doth oppress and load the spirit in the nerves.

What the Railroads Do for Public Health

ARCHIBALD CHACE

RAILROADS make the spread of communicable disease a matter of national concern. Disease "travels on legs." It is usually carried by human beings, and closely associated animals, so that an outbreak in one section might quickly penetrate the country by means of fast railway trains carrying millions of people, if precautions were not taken. Then, too, accidents are a considerable source of disability to railway employes and trespassers; to a very small extent to passengers. How are the railroads meeting these problems?

This question can be answered briefly by the statement that the railroad companies of this country are undertaking to meet this responsibility by preventing accidents, preventing infection of employes and passengers, promoting community health, treating sick and injured, and cooperating with the public and local, state and federal health agencies.

Prevention of Accidents

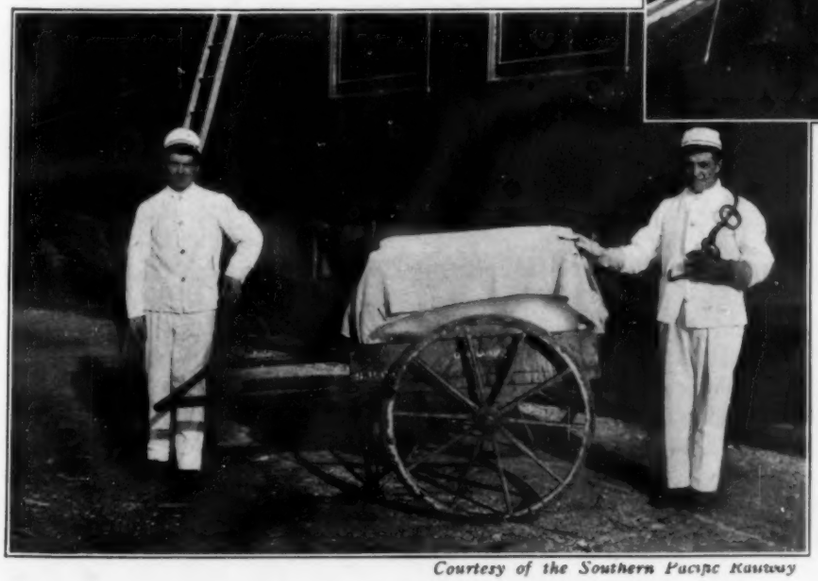
The first step in the prevention of accidents is the perfection of mechanical equipment. This has been so well done that even in the year of greatest railroad energy (1920), with a heritage of poor equipment, only 18 per cent. of the collisions were due to mechanical defects: 82 per cent. were due to man failures.

Most of the railway systems and short lines of North America make some attempt to examine applicants for train, yard and engine service. A few roads examine all applicants except maintenance-of-way men, and a few have periodic reexamination. In the past, very little attempt has been made to gather information about an applicant's or an employe's mental and nervous condition, except the special senses of sight and hearing.

The American Railway Association has appointed a Committee on Physical Standards, which has made an important advance in recommending uniform methods of physical examination. Another committee has made a noteworthy report on hernia, showing that rarely, or never, has a "rupture" resulted from an injury, but that it is practically always due to an inherited weakness. The application of this principle in physical examinations is obvious. The relation of syphilis to railroad accidents has been outlined, and the venereal problem in general considered.

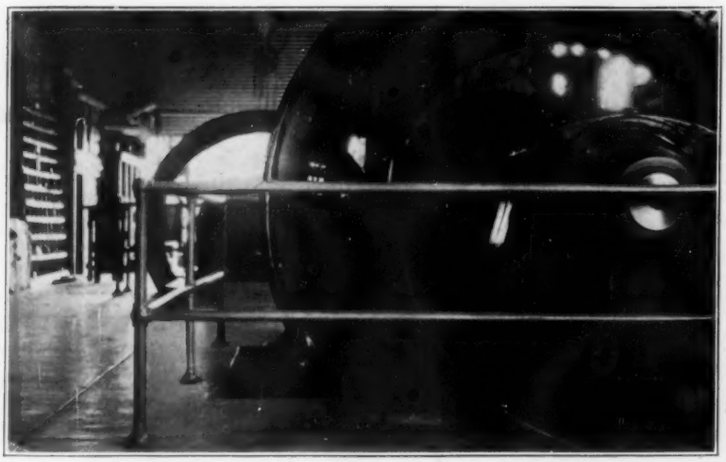
These are only stepping stones on the road to complete physical control of such men as are in dangerous occupations. The railway surgeon must do his part. If the mechanical engineer can control mechanical accidents, the surgeon must be given the opportunity to keep the healthy and mentally robust man at the throttle. He can do so only with the help of railroad management and labor leaders. These men are

Aisle strips, cushions, and mattresses are thoroughly cleaned with compressed air by vacuum system.



The men who ice the cars wear white duck uniforms and gloves. The ice carts are sterilized and the ice covered with clean white canvas.

Courtesy of the Southern Pacific Railway



Motor driven machines are gradually displacing the old belt driven types, and guard rails have been placed around all moving machinery.

Danger signs are placed on high-voltage electric appliances. They stand as a warning for care.

now in a large way seeing this necessity and beginning to act on it.

The trespasser still remains one of the great accident problems. There is a vast army of men who beat their way over this country on freight trains, some looking for work, some mere tramps, many criminals. These men are in greater danger than troops in most battles.

A strenuous effort to prevent street-crossing accidents is under way. You have seen the posters. The railroads each year are making hundreds of crossings safer.

Both in track and rolling stock, improvements go on year after year. Compare the light wooden cars, the lack of inspection and the twisty little rails of a few years ago with the present conditions of railroading. When you fret at a delay at a station, did you ever realize that your car, the locomotive, or some part of the train was being inspected to be sure that you would reach your destination safely? Although some delays may be overcome, it is equally true that your safety may depend upon delay.

In railway shops heavy work must be done. Here the safety first movement, under the leadership of the National Safety Council, has had a great influence. The individual motor driven machine is gradually displacing the belt driven machine. Guards take care of the forgetful, and signs and safety meetings warn the workman continually of the danger of overhead cranes, the slipping jack, and the need of care in every operation. Foremen and mechanical engineers understand and seek to apply the principles of proper light, ventilation and the prevention of fatigue—principles which mean increased production with fewer accidents.

The first aid movement, so largely fostered by the Red Cross during the recent war, went too far. Up to a certain point this work did good. Beyond that point it left a trail of self-medication, and serious infections from poor treatment of wounds by "graduates in first aid." This work should by all means be continued, but continued with care and supervision.

Preventing Infection

The Railway Sanitary Code, largely the work of that excellent sanitarian, Dr. Thomas Crowder, medical director of the Pullman Company, has been incorporated in the interstate quarantine regulations of the United States Government (Public Health Service), accepted by twenty-eight states, approved as a guide to standard practice by the American Railway Association, and also approved by the Association of State and Provincial Health Officers.

Nearly all of this has been done in the past two years. Before this chaos reigned. A sanitary measure, or condition, lawful in one state, might be illegal in the next state. Ill advised legislatures, or misguided departments of health, acting with the best of intentions, enacted laws or regulations which made interstate travel well nigh impossible. So the Railway Sanitary Code found ready acceptance.

Its provisions protect the public from communicable diseases so far as modern science can protect, and with the least disturbance of interstate travel. If its provisions are conscientiously carried into effect, the public need have no fear of contracting these diseases from known cases. This statement has two loopholes: the unknown cases and failure to comply. If public opinion is aroused sufficiently to assist in making known such cases and in demanding compliance, the law is good.

The traveler, not having the camel's capacity, is vitally interested in drinking water. Is it safe to drink from the tank in a railway coach? With what communicable diseases may one be infected, granted of course that there are individual drinking cups? Typhoid fever, diarrhea, dysentery and similar diseases are usually water or milk borne. It is obvious, therefore,

The filler block prevents the catching of feet in the switches.

Courtesy of the Southern Pacific Railway

In certain sections of the country one railroad uses this dust laying appliance attached to the tender of the locomotive.

that the answer to the first question depends upon whether the germs of such diseases are present in the water in the tank. And since the germs make no difference in the appearance of the water, it follows, that the traveling public cannot know when such water is safe. The traveler must rely on the intelligence and good faith of both the communities and the railroad management. So you have a right to inquire how well the railroads are keeping faith.

The water supply must be safe. This is largely a local problem, strictly the business of the cities and towns. Yet the United States Government requires railroads to have examined every few months the water supplies used in interstate coaches, and the Public Health Service is the judge of their purity. Under this arrangement the purity of the water should be reasonably well controlled.

The transfer of the water from the city supply to the traveler's drinking cup in uncontaminated condition is the railroad's business. The tank must be clean and sterilized with live steam at stated intervals. The hose through which the tank is filled must be clean and the end must not be allowed to drag in the mud. The ice must be properly handled, and after July, 1924, must not come into contact with the water.

This is the law for the protection of the traveler, yet the railroads have not stopped here. In some localities where they are not satisfied with the city supply, the water is sterilized with liquid chlorine—so scientificially that it cannot be detected. This has saved many a passenger and employe from disease, without the slightest injury to health. Wells at section houses and small stations are frequently, like so many wells in the country, regarded as "the best water in the United States" until an epidemic breaks out. The railroads are investigating these wells before the epidemic, instead of after; offering free typhoid vaccination to employes.

Notwithstanding these precautions, one still finds a few people who insist upon using a common drinking cup, putting dirty fingers and dirty ice in drinking water and misusing the drain of the water tank for a cuspidor. When will the public stand up energetically for its rights against this small quotient of ignorant travelers?

Another health problem arising indirectly from water is mosquito borne disease. In slowly moving water these insects grow from eggs to adults. Certain species of mosquito are infected with malaria and yellow fever, if they bite an infected person. They can, in a few days, transmit the disease to well individuals. So far as known this is the only way that these two diseases can be "caught."

The ultimate destruction of malaria and yellow fever is a drainage problem. Next in importance is the proper care of the sick by screening and by treatment.

All these problems are strictly community problems. Yet anything that vitally affects the health of the community reacts upon railway income. So some roads are attacking the problems not only from the standpoint of safeguarding their patrons and employes, but also from the broad viewpoint of public health. Mr. Edwin Gould, chairman of the Board of the St. Louis Southwestern Lines, has been, I believe, the first to inaugurate antimalarial work as a railroad enterprise.

Of a very different character, are the prevention and treatment of venereal infection among railway employes. Experience shows that about

six per cent. of railway men each year are infected with venereal diseases, of whom nearly half have syphilis. This includes the very high incidence of these diseases among negroes. A frequent patron of dining cars would not like his soup tasted by a cook whose mouth was filled with syphilitic ulcers, or served by a waiter with some other communicable disease. To prevent these situations, dining car crews are physically examined at stated intervals and all reports acted upon.

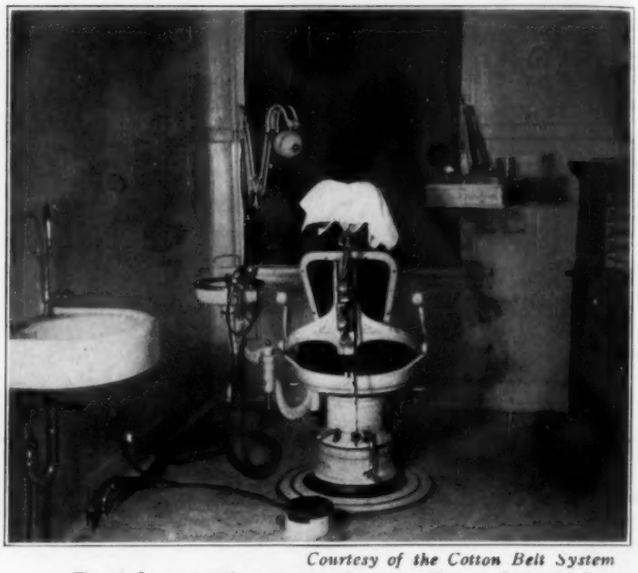
These diseases play even a more important rôle. A very high percentage of men claiming injury are found to be infected with venereal diseases. Certain types of insanity, due to syphilis, give rise to very dangerous situations when conductors, flagmen, engineers, and train dispatchers are afflicted. Altogether, venereal diseases should be a very deep concern to all railroads which have the safety of their employes and the public at heart.

Another disease of which one hears a great deal is tuberculosis. This may be transmitted, like other respiratory diseases, by the spray from the mouth in talking, coughing or sneezing. This is the concern of the public. The railroads are doing their part in careful carpet cleaning, scrubbing car floors and woodwork, seat cleaning, the clean sheet over the blanket in sleeping cars, and the individual drinking cup. When will the people learn to do as much to protect themselves and others? When will they learn to use a handkerchief when coughing or sneezing?

To a limited degree, ventilation, lighting, heating and overcrowding are problems in the prevention of infection. You may have had cause to complain of all four in your travels. Think back a couple of decades to the time of the stove at the far end of the coach, the dingy oil lamps and the draughts. Compare all this with the Garland ventilator of the modern coach, the electric light, and steam heat. The real test of the efficiency of railway service, in health matters, is the average home of the community served. If the public care enough to protect themselves, then it is the duty of the railroads to help in the good work. Surely enough has been said to show the reader that most of our railroads are not only keeping faith with you, they are lighting the way in many phases of public health work.

Promoting Community Health

The warfare on malaria is carried on by the railroads, usually cooperating with state and federal health agencies. Oiling, drainage, larvicide distribution, screening, the quinine ration, treatment of the infected, and educational measures among school children, chambers of commerce, and local government officials, all are promoting community health in one of the most far-reaching ways. The railroad demonstrates,



Courtesy of the Cotton Belt System

Dental operating room in a railway hospital. Such rooms are maintained by certain railroads so that their employes shall receive the best medical attention.

offers help, and teaches the coming generation the lesson of community hygiene, so that they may carry on the good work.

The treatment of venereal diseases among employes assists the communities by helping to lift the burden of this disease. Due to the problems involved in the lay-over away from home, the boarding house, the methods of recruiting and the turnover of younger employes, railroad men appear as a class to be heavily infected. The Mayo Clinic reports them to be seven times as often infected with such disease as farmers. Other incomplete statistics indicate that about six per cent. are infected annually. To combat this situation is almost a superhuman task—truly so when our laws are not enforced. Nevertheless, several railroad systems are attempting to treat all such cases. No greater service to the community is possible.

Treating the Sick and Injured

The hospital and relief associations on many railroads take care of a great mass of illness and injury which would otherwise be a burden upon communities. These associations give medical and surgical treatment at a very low cost. They are frequently managed jointly by the employes and the railroad companies. The usual practice is to deduct the cost of treatment from the pay check on a sliding scale according to the monthly wage. The money so collected is expended under the supervision of the chief surgeon. He is governed by the rules of the managing board upon which the railroad company usually has representation.

The railroads of this country have a deep sense of duty to the public and their employes in matters of safety and public health.

Our Indoor Deserts

ELLEN A. REYNOLDS

FOR a long time it has been known that outdoor air has a stimulating effect in both sickness and health. The transfer of a tuberculous patient from a city tenement room to the roof adjoining means all the difference in many cases between recovery and death. In spite of all the knowledge that scientific experiment and research have made available within the last few years, however, we do not have an accurate explanation of why outdoor air has this wonderful effect. It may be due to the effect of the ultraviolet rays on the hemoglobin, the red coloring matter of the blood; it may be due to the stimulating effect of these rays on the white blood cells that act as policemen and attack the disease germs; or it may be due to the changing stimulus of varying outdoor temperature and winds on the blood vessels of the skin, whereby circulation and food assimilation are increased. Recent evidence appears to show also that the difference in moisture content between outdoor and indoor air, especially when the latter is artificially heated, is a potent factor in recovery from disease.

Death Valley, California, is the driest desert in the United States. We don't think of a desert as the most pleasant and healthful place in which to live; yet the air in many of the homes in this country is as dry as that of Death Valley. This is one of the vices of our housekeeping. We don't let in enough fresh air and, according to recent evidence, we don't keep the air moist enough.

What Makes Bad Air Bad?

Whatever the explanation may be, the skin seems to be the first point of attack so far as atmospheric conditions are concerned. The membranes lining the nose, throat, and breathing tubes, since they are a continuation of the skin, are also affected by the moisture content of the air.

A number of authorities are agreed that the factors distinguishing good air from bad are those of proper temperature, proper humidity, and adequate movement of air. They have shown in a general way that moist air is depressing and enervating, while dry air is stimulating, and that body processes are slowed in warm air and quickened in cold air. While there is great power of adaptability by means of suitable food, clothing, and muscular activity, certain combinations of temperature and humidity have been found to be not only uncomfortable but actually harmful. The worst of these combinations are cold damp air, warm moist air, and excessively dry air artificially warmed. Most dwelling and business houses in winter have the third combination of factors, namely, excessively dry air artificially warmed.

The good or bad effects of outdoor or indoor air have been found to be due to the effects on the skin and its heat regulating mechanism; in warm moist air the loss of heat is slightly increased above the amount desirable; but if there is much humidity the loss of heat by evaporation is checked to such an extent that there is discomfort and even increased temperature. There is a neutral zone, 68-70 F., when humidity has little effect on our feeling of comfort or discomfort. This is therefore the favorable indoor temperature for sedentary workers. A few degrees above or below this temperature greatly influences comfort.

The Comfort Zone

The comfort zone, as defined by a number of authorities, lies between 68 and 70 F., with a minimum relative humidity of 30 per cent. and a maximum of 55 per cent. Indirect evidence has been accumulating for some time to prove that the air in most dwellings, schools, and business houses is not conducive to health in winter. Part of this evidence is the tremendous improvement in health when delicate children or adults have been transferred to outdoor living or sleeping quarters. This was noted in government hospitals during the influenza epidemic, and statistics gathered from hospitals have shown also an increase in the death rate when the humidity was low.

The explanation seems to lie in the fact that when air is warm and abnormally dry it causes an increased evaporation from every moist surface. Such air is equally unfavorable in its effect on the skin and mucous membrane, since it tends to make them dry and crack. Owing to the constant evaporation with its taking away of heat, the dry atmosphere may cause a sensation of chilliness even though the temperature may be 72 F., the maximum for health.

Experimental Observations

Observations of the temperature and humidity in the rooms at the School of Home

Economics, Cornell University, have been recorded for six months, and the comparison with outside temperature and humidity noted. These observations were made in an office in which there was a regulation size radiator under a large window that was kept open all the time at least a foot. The door opposite the window was opened and closed about ten times an hour. An air movement was perceptible in the room during most of the day. The heat was steam, and no pan of water or humidifying device was used when the record was kept. Effort was made to keep the air in as good condition as possible through natural ventilation; and windows throughout the building were kept open at all time even in midwinter.

If the thermometer in the room under observation rose above 68 F., the heat was turned off, although the occupant came and went as in an ordinary dwelling, so that the temperature showed a normal fluctuation. This variation would be the least that could be expected in an ordinary home without automatic regulation. Through constant window ventilation with air movement the conditions were as good as could be secured without artificial means and there is reason to believe that the conditions were better than in the average uncontrolled dwelling or business house in which no method is devised for cooling or artificially moistening the air. The range of temperature noted in the records was from 60 F., to 77 F., with an average of 67.9 F. This average is very near the optimum, 68 F.

Dry Air Makes You Nervous

In spite of the favorable temperature maintained, the humidity average was 22 per cent., which is less than the minimum limit of safety. The occupant of the room suffered through the winter from a mild irritation of the skin and irritation of the nose and throat, in spite of every personal hygienic measure to prevent such trouble.

The direct explanation of some of the bad effects of this indoor air may be found in some facts selected from the record. When we are outdoors on a cold day and breathe the air at a temperature of from 1.5 to 41 F., that contains from 60 to 100 per cent. moisture, we are taking moist air over the mucous membrane that lines the nose, throat and lungs without irritation to the membrane or any effect on the natural secretions. If we bring the same air into the room and heat it to 65 or 72 F., the air has only from 18 to 22 per cent. moisture, and hence is dry; in passing over the mucous membrane and skin, its capacity for moisture enables it to take away the moisture from the body, with an accompanying loss of heat to the body. The natural secretions of the mucous membrane are dried and since these secretions have a slight germicidal effect, the membrane does not have sufficient protection against bacteria that may enter the respiratory tract.

The constant adjustment made by the nerves of the skin in order to compensate for the loss of heat results in a nervous tension, and consequently irritation. All of these effects are unpleasant and in delicate persons, who have respiratory diseases, the effects may be dangerous.

In a recent study of 3,612,000 deaths with the corresponding weather conditions, reported in the United States Weather Bureau reports, C. W. Armspack states that the ideal humidity is about 51 per cent., and that any variation above or below this limit has a marked effect on health.

Keep the Air Moist

The relative amount of moisture, the movement and temperature of air are important factors in relation to health. Of these factors low humidity in artificially heated dwellings is important in its effects on the average individual.

A temperature of 68 F. and an average relative humidity of from 45 to 55 per cent. is considered favorable; the average indoor room in winter, however, is almost as dry as a desert, since the humidity is often between 15 and 22 per cent. This excessive dryness calls for excessively high temperature in order to balance the loss of heat from the body that is caused by excessive evaporation. Evidence is accumulating in cases of respiratory diseases to show that a small decrease in the relative humidity affects the death rate appreciably, and that the bad effects on the patient seem to be due to the effect on the heat regulating mechanism, the mucous membrane and the nervous system.

The low humidity indoors in winter conduces to cold and other respiratory troubles, since the bactericidal effect of the mucous secretion in the nose and throat is prevented by its evaporation, due to the drying effect of the air.

The remedy for these conditions is found in one or more simple procedures.

Follow These Rules and You'll Feel Better

1. Increase the size of the furnace pans so that at least 15 gallons of water may be evaporated daily.

2. Keep pails of water under registers or keep large pans on the radiators, stoves, and registers.

3. Grow large-leaved plants in the house.

4. Keep a window open even in midwinter so that the cool moist outside air may modify the indoor dryness.

Uncle Sam's Fight on Germs

III. How He Studies and Solves Problems of Health

E. K. FOLTZ

NOTWITHSTANDING the great advances in medical research within recent years throughout this and other countries, so many new problems are constantly arising that it seems we are scarcely on the threshold of knowledge. Many of these problems are as nebulous as the Milky Way and as fascinating as the search for oil. For example, why does one attack of scarlet fever protect from future attacks? The answer is, immunity is established. Excellent; but what is the fundamental principle involved in conferring immunity? What is the cause of cancer? What makes the arteries harden at fifty in some persons, and at eighty in others? What . . . . But why go on? We know that in nature's workshop are stored away unknown principles which the hand of man seeks to grasp for the benefit of living things. The trail of many of them is unblazed; yet now and then from the multitude of experiments daily carried on there comes some new knowledge, a phenomenon that has not heretofore been recognized, a reaction at variance with something that has been carried on before. And we must be satisfied to take one step at a time.

A couple of years ago, a great scare went through the country. Anthrax! A certain make of shaving brush seemed to be causing all the trouble. Uncle Sam's Research Laboratory got busy and found that the usual method of disinfecting had failed to kill these germs, and as a consequence, they were being imported into this country. Read what the United States workers did to make this country safe for shavers.

Among the problems demanding new lines of attack is that of tuberculosis, a plague that has been the *bête noire* of mankind and the animal world from time immemorial. Varying in its forms as do the floating clouds, tuberculosis has steadily marched on, linking the hand of death with that of the living. A few years ago it was said on excellent authority that one of every seven deaths was due to tuberculosis. Recently this rate has dropped, through improved methods of handling the sick, until today it stands somewhere in the ratio of one to twelve or thirteen. We know what tuberculosis is, we know what it does, we see the germ under the microscope. Yet despite every effort and the expenditure of vast sums on medical research, no one has succeeded in devising a method of direct attack on the bacillus or its permanent riddance when it inhabits the body.

The bacillus of tuberculosis gains access to the body through several channels. In most cases it dies before damaging the tissues—otherwise the human race would soon disappear from the face of the earth; but once it becomes fixed in the body it is exceedingly difficult to get rid of. The organism has a way of protecting itself and its growing family by encasing itself within a waxy substance, which no harmless medicine has been found to dissolve. In this covering it thrives and proliferates. The question naturally arises, How does it do it?

We are fairly conversant with the ways of the *Bacillus tuberculosis*. We know that it grows and persists and destroys, and we combat it by rest, fresh air, and food. Often we are successful. Notwithstanding our long acquaintance with the germ, we have never been able to get next to its real character. As a farmer once said of his nearest neighbor, "The more I see of him the worse I know him." The more we see of the insidious ways of the bacillus of tuberculosis, the less we know, it seems, about the devious cunning of this mortal enemy.

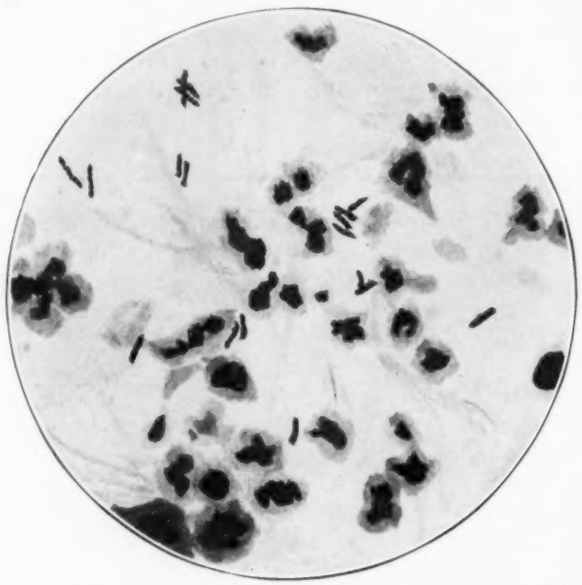
In the face of the failure of hundreds of investigators, the government has undertaken a study of one life phase of the *Bacillus tuberculosis*. The researches that the Hygienic Laboratory have in hand concern the biology of the germ; and in the hope of ultimately uncovering some new fact bearing on the problem, a small unit is now at work on the biochemical aspect of the bacillus. The experts detailed on the investigation frankly admit that they are dealing with an "*x*." But it must be borne in mind that one new piece of knowledge brought to light may have far reaching significance, a single original observation may suggest a new line of research; a biologic functioning, a chemical reaction, a physical constituent—any one of these may bear a relationship to the life history of the bacillus.

"Doctor, what are the prospects? Do you expect to make a discovery?" some one asks.

The answer is suggested by the reply of a Mexican peon who, when asked whether he expected little Juan to become president some day, answered, *"Quien sabe?"*

Scientists are not given to predicting or dreaming or guessing. What the outcome will be no one can tell. The work is not encouraging, nor is it discouraging; it simply moves on. When conclusions are reached, they will be given out.

Speaking of "announcements," the criticism is sometimes leveled at government scientific institutions that they do not herald their activities. This is true. It is true not only of the Hygienic Laboratory, but also of all government institutions. It is Uncle Sam's aim to handle his researches in the most conservative manner possible. This does not mean there is a clam-like secrecy pervading the scientific laboratories, a jealous guarding of ominous things going on behind closed doors. While it is next to impossible to get a government scientist to talk for publication, there is no institution in the world where scientists and laymen are more welcome than at the Public Health Laboratory in Washington. Scarcely a day goes by that the laboratory is not visited by men and women interested in science. These people come from everywhere—from every country in Europe, from Japan, China, South America, and all sections of our own country. They speak a variety of tongues, but have one thought in common—the advancement of human kind.



Take a peep at the worst enemy of mankind, the germ of tuberculosis. The little rods in this picture are the germs in saliva as seen under the microscope.

One of Many Special Investigations

One of the interesting pieces of work recently completed at the Hygienic Laboratory has been the microscopic examination of some 14,000 specimens from soldiers returning from overseas duty. It had been feared for some time that many of our boys had become infected with amebic dysentery through close association with colonial troops while in France. As the United States, with the exception of certain areas in the south, has been virtually free from this type of dysentery, the introduction of such a serious infection and its possible dissemination throughout the country by returning soldiers threatened a menace of grave importance. If this were the case, the sooner we knew it the more quickly could health authorities take steps to eradicate the disease.

Arrangements were accordingly made with the veterans' hospitals scattered over the country, and so many specimens were sent that it became necessary to employ a large staff of aids, mostly young women who had recently been graduated from college and who had had courses in zoology. After nine months of strenuous work, the investigations were brought to a close, with the happy conclusion that our overseas men were as free from infection as the men who had not gone abroad—a matter for national congratulation. This was a piece of research on which the government had spent considerable money and obtained practically negative results. Yet the results set at rest the apprehension felt for this phase of health.

Hunting Germs of Disease in Food

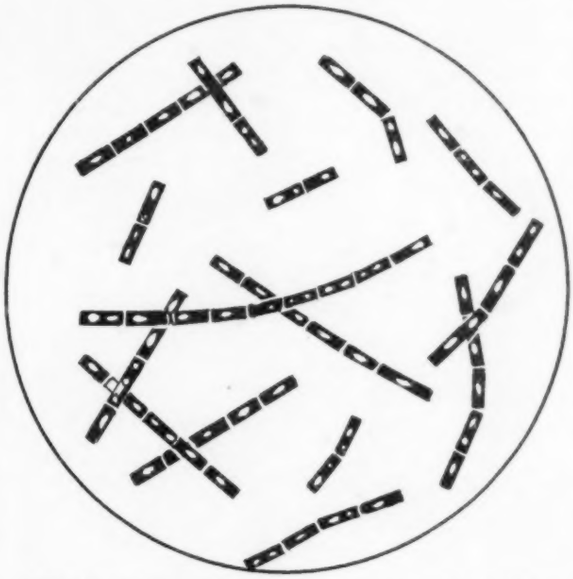
During the war the laboratory was given over largely to investigations bearing more or less directly on the health of our troops. The control of serums and vaccines was tightened up, and the production was kept up to the highest standard of efficiency.

One of the interesting phases of war work concerned the examination of foods that were suspected of being poisoned by the numerous enemies that were supposed to be in our midst. Food, candies, clothing, medical supplies—almost every tangible kind of article that in any way reached our troops was looked on by our excited people as a means of "boring from within." When these articles first began to come in to the laboratory they were handled very gingerly and with a high degree of respect. They were submitted to bacteriologic tests for the presence of disease organisms and to chemical examination for poisons.

It soon became evident, however, that our people had worked themselves into a nervous state, taking fright at shadows, for only a single specimen of the vast number brought in for examination was intentionally contaminated. The lone exception was a box of a well-known brand of breakfast food. An intelligence officer brought in five packages of this cereal one day, and stated that powdered glass had been found in one. Four of the

packages had never been opened. The contents of the first package were carefully passed through a series of fine-mesh sieves and, sure enough, a quantity of powdered glass was recovered. The other four packages were then put through the same examination with negative results. The intelligence officer at once smelled a rat. He started things going, and within a few hours arrested the man who had put the powdered glass into the cereal. The whole thing was a "frame-up." It happened that the purchaser and the storekeeper had had trouble, and the customer had been struck with the bright idea that he could ruin his grocer by "framing" him as a public enemy. But his plan went astray and proved a neat little boomerang.

One of the favorite ways of testing food in the laboratory was by eating it. Everybody in the laboratory was anxious to get in on these tests. The most delicious bonbons that ever went into the mouth were passed around in quantity. A consignment of splendid chewing candy proved a gold mine for the dentist. Preserves, canned fruit, tinned delicacies of all kinds, bakery products, soft drinks, and some not so soft—all were welcomed and properly "tested." Had the war continued a few months longer the Germans might have won a great victory at the Hygienic Laboratory by killing the staff through high living.



Within these rods are the spores from a case of anthrax discovered by the United States Bureau of Labor Statistics. Anthrax spores have been known to withstand boiling for thirty minutes.

Hunting Germs of Disease in Articles in General Use

The old story of germs in court plaster went on the rocks when it hit Uncle Sam's research laboratory. Likewise, that of the Red Cross sweater that was said to be infected with something that would have an awful effect on our overseas men. Both got serious attention and went by the board.

An interesting piece of work carried out since the war concerned the infection of shaving brushes with anthrax. For the benefit of those who may not know what anthrax is, it should be said that this is sometimes referred to as "malignant pustule" or "wool-sorters' disease." The disease is conveyed by a germ that causes a severe abscess which often results in death. Anthrax is primarily a disease of sheep, other domestic animals sometimes becoming infected, and is not prevalent in America; but in certain countries it is rather common in horses and sheep. Within the last few years cases of anthrax have begun to appear in this country among men, particularly soldiers, some of whom died of the disease.

Investigation soon showed that the disease was confined to users of new shaving brushes of certain makes, and immediately suspicion fell on the hair going into the manufacture of the brushes. Inquiry developed the fact that the hair of these infected brushes had been imported from the Orient where anthrax prevails and that, owing to the very resistant nature of the anthrax germ, the usual methods of disinfection had failed to kill the spores clinging to the hair. The germs were accordingly transferred by the most approved technic from the brush to the face of the unfortunate user. Experiments were carried out which quickly resulted in devising an efficient method of sterilization of bristles, and the trouble seemed to be over. But sterilization costs money. There is now a bill before Congress to govern the manufacture of shaving brushes, that the country may be made safe for shavers.

Taking the Cure from "Cure-Alls"

Among the subordinate activities of the laboratory has been the examination of numerous "cures" that have been sprung on the public from time to time. These alleged discoveries cover a wide gamut, ranging from cures for the garden variety of the common cold based on Indian "yarbs" to intricate and, in some instances, pseudoscientific methods.

Most notable among the latter was a notorious treatment for tuberculosis, familiar, no doubt, to many of the readers of HYGEIA. Had it not been for the federal law regulating the interstate sale of serums, vaccines, and analogous products, the perpetrators of this huge fraud would have robbed the people of America of millions of dollars and, worst of all, would have left a long trail of disappointment and crushed hope in their wake. As it is, one of the most eminent bacteriologists in the federal government spent many months in research on the "cure." The question was approached with an absolutely open mind.

As the work proceeded, the "discoverer" was given the benefit of every possible doubt. Yet in spite of this and of every advantage that a scientific investigation could extend, it gradually became clear that the object of the exploiters was not to benefit humanity, but to make money. Seeing that he could not foist his "cure" upon the people, the author of the scheme left the country.

Generally speaking, the less enlightened a man is, the more positive is he that he has a cure-all. The shrewd manipulator of medical frauds steers clear of the government; he depends on specious advertising for gain and keeps within the letter of the law. He knows that a collision with Uncle Sam means a flat tire. The man who honestly believes that he has a cure-all is often a source of untold annoyance. When shown by the most clear-cut methods that he has nothing of value, he still persists because he has tried his remedy on some one and that person still lives. But it is folly to imagine that all of the sponsors of "treatments" and "cures" and "remedies" are inspired by a humanitarian motive in tendering their discoveries to the government. Far from it. Of all the "cures" offered to the government for many years past, there comes to mind but a single instance in which the inventor proffered his remedy free of charge without a string tied to it.

The Hygienic Laboratory, being a research institution, aims to carry out the ideals for which it was founded. The problems of health and disease constantly arising are far more than a single institution can handle with any degree of success. It therefore becomes a matter of selecting those which may best be prosecuted with the facilities at hand, and of these there is a growing abundance. In many of the researches the staff cannot hope to accomplish much by a policy of isolation and for this reason the scientists at the institution keep in close touch with scientific thought by cordial relations with other institutions throughout this country and foreign countries. It is a matter of sincere gratification that this interchange of ideas has resulted in mutual benefit and has redounded to public welfare.

One of the greatest sources of inspiration in the pursuit of researches pertaining to the public health as carried out at the Hygienic Laboratory has been the splendid support given it by Congress. Throughout the ebb and flow of politics, the sway of parties, factional differences, and legislative difficulties incident to the vigorous growth of a country such as ours, it is a signal portent for future usefulness and a healthy sign to our vast population that each succeeding administration has seen to it that proper funds have been provided for carrying on the work. Party changes have had no adverse effect on the researches in hand. On the contrary, it is to the legislators and the executives at the head of the government that the laboratory owes its achievements.

WHAT TO DO FOR THAT "TIRED FEELING"

In *McCall's* magazine for November "How to Get Our Vitamins" is discussed by E. V. McCollum and Nina Simmons, School of Hygiene and Public Health, Johns Hopkins University. They laud the American Medical Association for the strong fight it has made against the fakers who have played upon the hopes of the credulous, in helping them to diagnose their own ills and to prescribe for the treatment of their cases. But the article points out that there is a new field for fraud in the marketing of so-called vitamin preparations to that part of the public who have a "tired feeling."

The laboratory results when they tested these commercial vitamin preparations were about what was expected. Without exception they found them entirely worthless.

The article points out that it is perfectly true that some of our foods are deficient in one or more vitamins, but that does not mean that we should buy worthless medicines to make up the loss. It does mean that we should make a wiser selection of foods.

"The keynote to successful nutrition lies in the proper selection of foods. The place to get our vitamins is in the grocery store and the fruit and vegetable market, and not in the drug store. When the family budget is invested in wholesome foods, properly selected so as to form a well-balanced diet, all the vitamins necessary for health will be obtained, and in addition the body will be supplied with a great array of other equally important substances which nobody's commercial vitamin tablets can furnish."

Every year tuberculosis takes a toll of 100,000 lives.

The loss is as much as the most devastating war.

What are you doing to prevent this?

Prevention of tuberculosis begins with the babies. The county fair has become a place to exhibit them.

Mobilizing Against Tuberculosis

C.-E. A. WINSLOW

THE situation confronted by England in 1914, and by the United States three years later, made it clear that a nation must be prepared to mobilize every male citizen of military age and every ounce of economic and social energy at its disposal for defense against foreign foes. It is equally obvious to the sanitarian that every year the American people are subjected to an attack, less manifest to the unthinking but quite as destructive in the aggregate as the most devastating war—the persistent attack of the germs of communicable disease, with the germ of tuberculosis, "the captain of the hosts of death," at their head.

Not once or twice in a century, but every year, tuberculosis takes a toll of nearly 100,000 lives, one out of every thousand persons in our total population. Is it not worth while to mobilize our forces effectively against so deadly a foe? Is it not the duty, not only of every physician but of every intelligent layman, to know something of the extent and the adequacy of the defenses of his own community against this controllable disease and to see that those defenses are strengthened at the points where they are weak?

The Campaign Against Tuberculosis

The campaign against tuberculosis is a complex and a many-sided one. It involves the control of primary sources of infection, such as pasteurization of all milk except that from tuberculin-tested herds in order to prevent the spread of the germ from the cow to man. It enforces the care of contact infection in human cases to check the passage of bacilli from one human being to another. This latter problem involves the forcible isolation of the wilfully careless consumptive, where no measures of persuasion will serve and, in particular, every possible effort to protect children from exposure to massive infection. A broadly planned campaign against this disease must include a consideration of such conditions of living and working as contribute to a lowering of vital resistance and thus prepare the way for tuberculosis. The protection of industrial workers against dust of stone, sand or flint (siliceous dust) is of primary importance in this connection. Every social measure which improves the housing and feeding of the people, or which militates against overfatigue will assist in controlling tuberculosis.

At present the real cornerstone of the defense against tuberculosis is the detection and hygienic care of the individual consumptive. The germ is so widespread that a large proportion of us show evidence of slight past or latent infection when tested by the delicate tuberculin reaction. Under these circumstances it is obvious that a high degree of vital resistance must be our principal safeguard rather than the elimination of all opportunities for infection. From the standpoint of vital resistance it is equally obvious that we can accomplish the greatest results by concentrating on those persons who are in particularly imminent danger, that is, those who are actually affected with the disease, but in its earliest and most readily curable stages. We cannot prevent, though we can minimize, infection with the tubercle bacillus. We cannot make the whole population so vigorous that all can resist its

attack, though we can and should strive to do so. What we can do, given the necessary social machinery, is to detect the disease in its incipient state and to build up the vital resistance of these particular individuals so as to ensure their victory over the invading germ.

The dispensary, for the early detection and treatment of incipient tuberculosis, the sanatorium, for the institutional treatment of those patients who stand in need of such treatment, and the public health nurse, for bringing suspected cases to the dispensary and for the supervision of cases living at home—these are the three great primary essentials of the campaign against tuberculosis.

How Tuberculosis Is Being Controlled

A recent study conducted by the Committee on Municipal Health Practise of the American Public Health Association gives us an interesting picture of the status of existing machinery for the control of tuberculosis, as it existed in the larger cities of the United States in the year 1920.

In seventy-seven out of the eighty-three cities of 100,000 population and over dispensary facilities for tuberculosis were provided. In forty-six cities dispensaries were under municipal auspices. In nineteen cities they were under private auspices. In seven cities there were both privately and municipally supported clinics. Nine cities had state or county clinics, and three cities had clinics supported jointly by county and city. On the average one visit per year is paid to a tuberculosis clinic for every forty-five persons in the general population. For the smaller cities (less than 250,000 population), only one visit per year is paid to a clinic for every seventy persons in the general population, indicating how much less developed their organization is than that of the relatively few large cities. In the rural districts results would undoubtedly appear still worse. It is particularly disheartening to find that the average number of visits paid to the clinics per patient per year is less than three, showing that many patients drift in and out of the dispensaries without receiving the persistent care they need. There was in service in the cities studied one clinic physician for every 67,000 persons in the general population and one tuberculosis nurse for every 43,000 persons. This is a personnel distinctly inadequate.

The sanatorium facilities of our large American cities are more nearly adequate than the dispensary facilities although these too fall short of a reasonable ideal. On the average, one sanatorium bed is available for every 1,678 persons in the general population. The most serious aspect of the problem is indicated by the fact that in those cities for which we have data, over 60 per cent. of the patients who enter the sanatoriums are admitted only when their disease has reached an advanced stage.

Weak Spots in Our Defense

When the movement for sanatoriums and dispensaries was actively initiated in the United States (and indeed throughout the world) a quarter of a century ago, the highest hopes were entertained of a reasonably complete conquest of tuberculosis by the use of these community weapons. Such hopes have fallen far short of realization. It is true that much has been accomplished. The tuberculosis death rate has notably declined, particularly during the past three years. Yet this disease remains, with heart disease and pneumonia, one of the three major causes of mortality.

It is particularly disconcerting to note the facts revealed by recent studies of the history of patients who have received sanatorium treatment and whose subsequent history has been carefully followed after their discharge. It

The modern health crusade teaches health habits in schools with plays and pageants.

appears from such investigation that only about one in four of such patients is alive and well enough to be at work, five to ten years after discharge from the average sanatorium. In other words our complex machinery is only about 25 per cent. efficient.

The reason for this failure is made obvious by a more careful analysis of the available statistics. The success attained by a given sanatorium, as measured by the condition of its patients five to ten years after discharge, depends simply on one factor, the stage of the disease at which the patients are admitted. If we consider only those patients who began treatment while the disease was in its incipient stage, the proportion of cases showing a real and lasting improvement rises from one-fourth to three-fourths. At the Mt. McGregor Sanatorium, maintained by the Metropolitan Life Insurance Company for its employes, the efficiency of the institution as a whole, estimated as above, rises to 75 per cent. instead of 25 per cent. The reason is simply that this company detects tuberculosis in its incipient stage by annual medical examinations and provides free treatment with a certainty of reemployment if the treatment is completed. Hence practically all the patients admitted at the Mt. McGregor Sanatorium are in a very early and curable stage of the disease.

The primary reason why we have not attained greater success in controlling tuberculosis is simply that we have not secured the treatment of the disease in its early stages. As the wise Bishop remarked, when he was told that Christianity had failed, "Oh no, it has not failed. The trouble is that it has never been tried."

Early Treatment of Tuberculosis

The first step in bringing about a more effective control of tuberculosis is the perfection of machinery for securing the treatment of the early case. The instruments in this search are the dispensary and the public health nurse, but the quality of our present services stands in need of fundamental improvement. The Committee on Municipal Health Department Practise estimates that one patient should be registered at the tuberculosis clinics for every 250 persons in the population, and that the total annual visits to the clinics should be ten times the number of patients. This will give one clinic visit per year to every twenty-five persons in the general population.

In order to attain any such results as this it is essential that the clinics should be so organized and so staffed that the patients shall receive not only sound medical advice but prompt, courteous, and considerate treatment. The attainment of such a result will be greatly facilitated if the medical service of the clinic is a paid service, for the work of the tuberculosis dispensary is far too exacting and important to be dependent on the chance of securing voluntary medical assistance.

The provision of an adequate public health nursing service is the other point of major importance in securing efficient control of incipient tuberculosis. The nurse is the most important instrument in bringing suspicious cases to the clinics for examination. It is one of her functions not only to secure the examination of all members of families in which a tuberculosis case has occurred, but to be alert throughout her daily rounds for any individual who displays symptoms which might possibly indicate the presence of tuberculosis. It is the duty of the public health nurse to exert a constant supervision over the life of patients who are under treatment at home and to follow up and watch over convalescent cases discharged from the sanatorium.

Early and accurate diagnosis, especially of children, is essential for the prevention of tuberculosis.

Tuberculosis nursing may be handled in two different ways, either by nurses who specialize in this particular field or by district nurses who do all the public health work and visiting nursing for a special district on the generalized plan. In the former case one tuberculosis nurse will be needed for every 25,000 persons in the general population. In the case of generalized service, one district nurse should be provided for every 2,000 persons.

It is by the provision of more and better dispensary service, and more and better public health nursing service, that we may hope to fill our sanatoriums with incipient rather than advanced cases and thus ensure in a majority

(CONTINUED ON ADV. PAGE 8)

Plain Facts About Health and Disease

HEALTH NEWS OF THE MONTH

Surgery of the Heart

Newspapers have recently contained numerous statements relative to the relief by surgical operation of a heretofore almost intractable disease—angina pectoris. Patients who suffered with the severe pains around the heart associated with this condition are usually treated by the use of sedative drugs and physical methods; the relief is, however, temporary and recurrent attacks cause great distress and prevent those afflicted from following their usual occupations. The new surgical methods are based on the suggestion of a German physician that the pains are conducted by nerve fibers which are accessible to the surgeon, and that relief might be secured by dividing these fibers. One German surgeon reported that he had performed the operation in six cases with excellent results. The cutting of the nerve caused a cessation of the pains, although it was not clear whether this result was due to a fall in the blood pressure or to a loss of sensibility in the parts. Last February, two American surgeons reported the results of the use of this surgical method in five cases. Death occurred in one case, and marked improvement resulted in the remaining four cases. Cases have continued to be reported both in the American and the foreign medical literature. Some physicians have questioned the use of the method on the grounds that the pain was a warning signal which caused the patient to lead a conservative life. The field appears to be one of the most promising that has been developed in medical science. The disease concerned is a severe one, causing great pain and interfering with a productive life. Probably continued experience will lead to the development of a certain and safe method and establish the type of case in which its application is most suitable.

The Smallest Bacteria

During the latter part of the nineteenth century, the term filtrable virus was introduced in medical literature to describe a group of disease-producing agents which were so small that they could pass through an earthenware filter, the pores of which were smaller than the smallest bacteria then known. Since these organisms were so small that they could not be seen with the highest powered microscope available, it became customary to speak of them also as ultramicroscopic organisms. Later it was found that, if these organisms were properly stained, their presence could be determined under the microscope, and the latter term was discarded. It is an interesting fact, as pointed out by Dr. Charles E. Simon, that the first representative of this class of disease-producing agents was an organism causing the mosaic disease of the tobacco plant. This was described in 1892. Two scientists were able to show in 1898, that the cause of hoof and mouth disease was an organism of this character, and it was suggested at that time that other conditions, such as scarlet fever and measles, might also be due to filtrable viruses. Finally, in 1913, a list of forty-one diseases, affecting man and various animals, was assembled, in which satisfactory evidence seemed to have been collected that the causative organism was of this character. Since that time a number of other conditions have also been definitely connected up with the activity of such small bacteria. The most recent investigations concern the relationship of a filtrable virus to epidemic encephalitis, epidemic influenza, measles and trachoma. Numerous investigators have shown, by injection of material taken from patients with epidemic encephalitis—"American sleeping sickness," an inflammation of the brain—that a disease resembling it could be produced in animals. When the tissues of the animals were examined, they were found subject to changes like those that occurred in human beings who had died of the disease. Workers at the Rockefeller Institute for Infectious Diseases have found an organism in nasal washings taken from persons with influenza which they believe is the causative organism in influenza, and numerous investigators have found organisms of this character in the blood and in the secretions of persons with measles.

It will be recalled that the existence of a filtrable virus was first described in connection with a disease of plants. The United States Department of Agriculture maintains in its Bureau of Plant Industry a special division in which the causes and methods of controlling plant diseases are continually being studied.

Conditions affecting corn, cabbage, potatoes and many other common vegetables are possibly brought about by infection with such a virus. Furthermore, it seems quite possible that the viruses are carried from plant to plant by insect carriers. Indeed, it appears that insects may not merely act as disseminators of filtrable virus diseases to plants and animals, but that they may themselves actually fall prey to the activity of these organisms. Of this type are diseases affecting silk worms, moths, caterpillars and bees. It can thus be seen what a prominent place this type of organism holds in the causation of disease in man and animals. Fortunately numerous research institutions are putting forth enormous efforts toward fixing definitely on the viruses the responsibility for the diseases concerned. M. F.

SAFE HOUSING FOR NEW YORK DEPENDENTS

OF the frightful tragedies occurring from time to time in various parts of the United States few are so serious as fire in a public institution for the insane and defective. A tragic fire occurred at the Manhattan State Hospital on Ward's Island, New York, last February, when twenty-two patients and three attendants lost their lives. The people of New York state were aroused to a sense of their responsibility to guard against a repetition of this fire. The legislature, by a unanimous vote, passed a bill authorizing a bond issue of fifty million dollars, to be submitted to the people of the state on election day this autumn.

The money, if voted by the people of the state, will be used to relieve the overcrowded conditions and to replace some of the old and most dangerous of the state institution buildings with modern fireproof structures. The president of the State Federation of Women's Clubs, the president of the Women's Christian Temperance Union, and the representatives of numerous other organizations are appealing to their members to do everything in their power to enlist the interest and support of the public in this important matter.

Says Governor Smith in his appeal to the people of the state: "The question now comes up to you, who are immediately responsible for your decision. I have done my part, the legislature has done its part, it is now up to you to do your part. If these old buildings are permitted to continue in use there will be other fires, and some morning, as you pick up the daily paper, you will read the headlines telling that such and such hospital buildings have burned and that a certain number of patients have been burned to death. If that time comes, and it is a practical certainty, each of you and every citizen in the state will have to feel that he shares the responsibility, that he had an opportunity to correct these conditions and to remove these dangers."

It is to be hoped that the people of New York will realize the responsibility which is on them. The conditions found in New York are repeated in almost every state in the Union; in many states they are worse. The dictates of common humanity demand that the governors of every state call attention to this matter, spur the legislatures, and through them the people, to action that will lead to the replacement by fireproof structures of every building used for the housing and care of dependents. J. M. D.

MARRIED WOMEN IN INDUSTRY

ONE of the chief problems presented before the National Conference of Social Work at its meeting in Washington last May concerned the factors demanding consideration in the establishment of standards for the employment of married women in industry. In modern social life women are tending more and more to enter into public affairs and to devote themselves to gainful occupations and professions. In an address before the conference Mary N. Winslow of the Women's Bureau in the United States Department of Labor, indicated that a consistent standard can be reached only by adopting a sane attitude toward the problem.

According to the United States Census, nearly two million married women are regularly employed in gainful occupations in this country. In 1890 less than five of every one hundred married women were employed, whereas in 1920, nine of every 100 married women were employed; the number concerned varied from 515,000 in 1890 to 2,000,000 in 1920. Moreover, employment has increased proportionately much greater in certain industries. The greatest increases have come in the field of manufacturing and mechanical industries—41 per cent.—and in occupations connected with trade —88 per cent. In domestic service there has been a decrease of 12 per cent.

From the material on married women wage earners assembled by the Bureau of Labor, it seems evident that married women are in industry for one purpose only: to provide necessities for their families or to raise their standard of living. Ninety-five per cent. of the wives and mothers contribute all their earnings to their families. This represents the gain from

women's industry. What is the cost? In her analysis, Miss Winslow points out that women are losing health and vitality because of overfatigue, resulting from long hours in factories followed and preceded by long hours at home. They are losing opportunity for educational development and participation in community life. They are not gaining freedom. Out of 522 mothers interviewed, it was found that 419 cook, clean and wash for their families in addition to caring for the children and working outside the home.

It comes, then, to a decision as to which does the more harm: the employment of married women or poverty. To Miss Winslow it appears that the question for the future is—how we are going to get increases in the family income which will make unnecessary the employment of married women. Only in this way can we keep down infant mortality and other serious conditions occurring as a result of such labor and keep up other family standards. M. F.

STOP THE CROP OF CRIMINALS

HOW stupid is man! Year by year, generation after generation, evidence piles up to show that in the matter of juvenile delinquency, as in so many other lines, prevention is vastly more effective than cure. And yet we go blundering along, allowing children to grow up in surroundings which are certain to promote delinquency. As a rule, when a youngster is convicted of delinquency he is thrown into association with older criminals who are certain to accentuate his tendency to crime. Fortunately, a few wise people from time to time realize the inadequacy of such methods and point the way to wise action.

Through a special gift of the Commonwealth Fund the National Committee for Mental Hygiene has been able to create a division for the prevention of delinquency. Cooperating with other organizations, a movement has been organized to study this problem. The work falls into two groups: a department of psychiatric field service (for the treatment of mental disorders) and demonstrations of field clinics, and a department of experimentation.

Two traveling clinics conducted by experts will be attached to moral courts, and other interested agencies in various cities, to demonstrate the value of psychiatric work in the prevention of delinquency and the conduct disorders of childhood. These clinics will seek to organize the social forces of that community most effectively to deal with the problem of delinquency.

The first traveling clinic completed its demonstration in St. Louis in December, 1922. Every child coming before the juvenile court receives a preliminary physical, mental and social survey. Then follows a careful summary of all the evidence and an estimate of the essential factors involved. Recommendations for treatment are made along medical, psychiatric, educational and social lines.

Fifteen annual scholarships of $1,200 each have been offered to students preparing for work in this field, for the greatest need is that of workers with thorough training.

Children of defective mentality make up a very small proportion of delinquents; a large majority are mentally sound. They receive their first tendency toward wrong doing from conditions under which they live. A drinking or brutal father, a negligent or immoral mother, lack of discipline, home conditions due to poverty, and many other similar factors are responsible for most of the cases of children who go wrong.

The school teacher, if properly instructed, can do more to prevent delinquency than all the other agencies.

The work of this group continued over a period of years will do much to arouse the people in each city where these demonstrations are staged to the importance of prevention in the matter of delinquency. J. M. D.

PREVENTING HEART DISEASE

DURING the past few years there have been organized throughout the United States several societies, including in their membership both laymen and physicians, which have for their purpose the prevention and relief of heart disease. The records of the Bureau of the Census and the morbidity records of the great insurance companies indicate that the next line of attack in the lowering of mortality rates and increasing the expectancy of life must be on the group of diseases included under the heading of heart and kidney diseases. Unfortunately, the problem is not as simple as that of controlling the infectious diseases, in which the cause is a specific organism which can be combated directly. In the case of heart disease the attack must be on a number of factors having to do with the growth and environment of the child, as well as on the infectious diseases.

The Department of Health of Newark, New Jersey, has recently formulated these considerations in ten brief statements which should be kept in mind by every parent: They are:

1. Heart disease is nearly always the result of rheumatic attack in childhood, either acute or chronic.

2. Rheumatism is an infectious disease caused by bacteria and is most prevalent in spring and fall months.

3. "Growing pains" and frequent "sore throats" are usually symptoms of a rheumatic attack.

4. Chorea or St. Vitus' dance is rheumatism of the nerve centers and is almost invariably accompanied by heart involvement.

5. Permanently enlarged tonsils and adenoids are the gateways through which the rheumatic virus gains entrance.

6. The heart is most frequently damaged during childhood and permanently disables the child in after-life. A child with a damaged heart requires special school work with graded rest periods.

7. A nervous child may readily be the victim of a previous attack of rheumatism or heart disease.

8. If properly cared for in the early stages, the individual with heart disease may look forward to the normal span of life as a useful member of the community.

9. Children with heart disease are not normal individuals and chronic invalidism may wait on ignorant treatment of the disease in its initial stages.

10. Rheumatic or nervous children should be medically examined. Do not neglect their childish complaints of tiredness, aching limbs or disinclination to work or play.

The price of prevention of heart disease is thus seen to be eternal vigilance. The time to prevent heart disease is when the conditions which may cause heart disease first appear. Sore throat, tonsillitis, painful joints, or minor infections are potentially serious conditions. Take care of them in time!

M. F.

THE HEALTH CARE OF CHILDREN

"I SEE no way out of the present tangle in which the human race finds itself because of its inability to cooperate and its failure in mutual understanding," said President Ray Lyman Wilbur of the American Medical Association recently, "except through the education and physical care of the child." The occasion was an address before the joint meeting of the National Education Association and the World Conference on Education in San Francisco. President Wilbur pointed out that the problems of the future must be settled by the children of today and in so far as these children have had insufficient food and have had to go through abnormal experience with disease or mental shock, it is inevitable that some lasting degeneration, both of body and mind, has been produced. Changes in modern civilization have brought about a serious state of affairs with relation to health of the child. When the child obtained his bodily development from work about the home and the farm, the problem was not so important, but nowadays the chief stress placed on the child is a long stretch of time spent in receiving adequate mental training. During this period the provision of proper food, adequate exercise and sufficient sleep should be given at least as much attention as the subject matter of the courses in mental training. Furthermore, the control of such minor diseases as the infections of childhood, weakness of vision, decay of the teeth and inequalities of growth, is of the highest importance in the child's future. "If I had the problem of elevating the general moral and mental tone of a backward community," President Wilbur continued, "I would seek the services of the public health worker, the sanitarian and the personal physician even before those of the teacher. Health education must go forward hand in hand with that of the mind."

Spoken by the president of the largest organization of physicians in the world and at the same time by a man who is president of Stanford University, one of the greatest educational institutions in America, these words demand serious consideration.

M. F.

AN ESTIMATE OF THE PHYSICIAN

A RECENT guest of the United States was Nathan Söderblom, archbishop of Sweden. In the course of several addresses delivered in this country he paid a notable tribute to the medical profession. It is notable, not only as coming from such a source, but also for the almost biblical dignity of its language:

"Behold the unassuming bravery of the physician! He sacrifices rest and comfort. He risks his life. He asks not who the patient is; it is enough that it is a suffering fellow-being. Medical practice brings him a living, but he carries it on as a help to others. He does his utmost. In the midst of our peaceful or troubled existence a quiet heroism is at work to which hardly any one pays any attention. The physician himself sees nothing remarkable at all in his courage or his efforts. It is the simplest and most natural thing in the world. Such is the true physician in Christendom."

M. F.

A SONG OF WINTER SPORTS.

Of all the gifts of Christmas,
That grow on Christmas trees,
I think the best are sleds and skates,
Snowshoes, mitts, and skis.
For rosy cheeks and brighter eyes
Are gifts that come with these.

MARGERY SWETT

BILLIE PARKS

HEALTH NEWS AND VIEWS

BUYING HEALTH WITH CHRISTMAS SEALS

Children with bent and twisted backs—and on whom tuberculosis is exacting its dread toll—are taking the "back to nature" cure. Every day these little boys and girls are turned loose to play on the spacious grounds of Muirdale Tuberculosis Sanatorium, the Milwaukee county institution.

Minus clothes, so that the sun and fresh air may heal their little bodies, they shout and play games quite as healthy children play in regular clothes.

The youngest patient at Muirdale is two years old. All these children either have tuberculosis or have been exposed to it.

This is only one of the many places that are helping to stamp out tuberculosis. The sale of Christmas seals has helped them continue this wonderful work.

For eighteen years tuberculosis associations have been fighting to keep you healthy. Today only one person dies of tuberculosis where two died before.

Christmas seals have helped to save the other life. The sale of Christmas seals is yearly assuming greater proportions and the national association hopes that eventually all holiday correspondence will bear the stamp which means death to tuberculosis.

SPICES HELP MAKE HISTORY

Spices possess such tantalizing flavors that it is not surprising to learn that they have been sought after by men from earliest times.

When Alaric, the Goth, conquered Rome in 410 A.D., he asked as a ransom 3,000 pounds of pepper, then worth more than its weight in gold. The first organization of dealers, it is said, was the "fraternity of pepperers," and it was in the fourteenth century that the name was changed to the "guild of grocers," which depicted on its coat of arms six cloves.

Venice at its height traded in spices to the amount of $10,000,000 annually, and it vied with Portugal in securing cargoes from far eastern ports. Columbus was bound for the spices of the East, when he chanced upon a new continent, and Vasco da Gama, the famous sea-fighter, made one of his most important voyages to secure a cargo of pepper, cinnamon and ginger from India.

The Dutch succeeded the Portuguese in the supremacy of trade in spices, later to have it snatched from them in the sixteenth century by the English and Germans.

Thus has the love of spices lived and grown through the ages.

NOT A BRAIN FOOD

"Fish is a tissue builder and for brain workers has no equal."

This bit of advertising, recently employed in a campaign to increase the use of fish, is an attempt to perpetuate the old and absurd belief that fish is brain food, say physicians and health workers. To assume that there are specific foods for brain, skin, muscle, lungs or liver building is a fallacy which often has been pointed out.

During the world war, an attempt was made to increase the consumption of fish in place of the much needed meat. One angle of this attempt was to overcome the custom in many homes of making Friday only "fish day."

There is no physiologic reason why the use of fish should be so limited, say physicians. Indeed there are many reasons why fish could advantageously become a more frequent ingredient of the diet in many parts of the country.

The government has issued a bulletin in which is discussed the proper methods to cook fish. There is no question but that the proper ways to cook fish enhance the flavor and will make it a more edible part of the American menu.

PAYING THE DOCTOR FOR HEALTH

The supposed Chinese proverb of paying the doctor to keep you well originated with the advent of the English traders in China. The small colonies of these people were established in different parts of the Empire, and each was paid a certain amount to have the English government supply them with a resident physician.

It is a far cry from the English colonies in China to the present day when a man of commercial prominence will give his doctor an annual retainer to keep him well. This man is using the same principles in the care of his body that he uses in the care of his business.

Pacific and Atlantic

LLOYD GEORGE VISITS VETS

Smiles light up the faces of the wounded soldiers when Lloyd George, former premier of Great Britain, makes the rounds. This picture was taken at the Christie Street Hospital, Toronto, Canada, during his tour of Canada and the United States.

Keystone

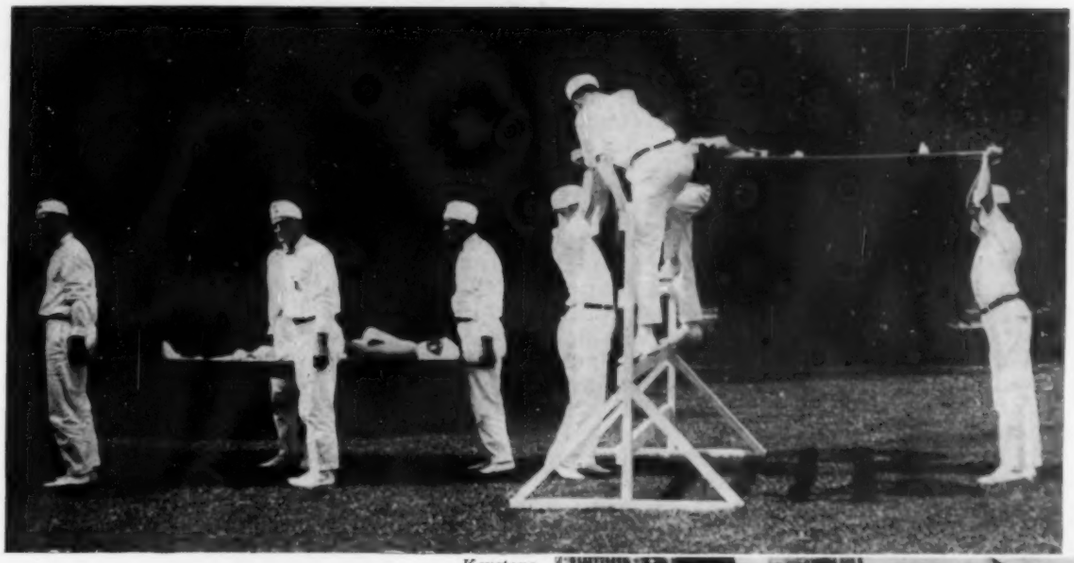
"BUG PROOF" ARMOR

This Smith College girl is now a Near East Relief worker. She is seen here inspecting a child refugee in one of the camps on the Bosphorus for typhus-carrying lice. Her costume was designed by the physician in charge for the relief organization work in the refugee camps, to protect relief workers from the deadly bug after it had claimed as victims several Americans and hundreds of refugees.

NURSES IN THE CIVIL WAR

Rarely if ever does one get a chance nowadays to get three Civil War nurses in the same picture. These three ladies live in Los Angeles and all were nurses in the days of '63. Left to right they are Mrs. Nellie Sheldon, 86; Mrs. Margaret Hayes, 90; and Mrs. Elizabeth H. Mills, 80.

Pacific and Atlantic



Keystone

FIRST AID METHODS

This team of the Baltimore Telephone Company won the John Barton Payne cup—the highest honors—for carrying an injured man over a six-foot obstacle without discomfort to him. The event was the National Red Cross Convention in Washington, D. C.

ENGLAND'S "ELLIS ISLAND"

You may not know it, but England also has its "Ellis Island" where an immigration camp called Ocean City is maintained by the shipping companies, in the vicinity of Southampton. Here undesirable immigrants are kept, as well as those who wish to continue their journey to America. Model bungalows, medical attention and playgrounds are supplied for all. In the picture below a card game is in progress.

Pacific and Atlantic

Keystone

A FIGHT AGAINST HUNGER

An old court at August Street, Berlin, where thousands of the poorest inhabitants of the city daily receive a sparing portion of soup from one of the city soup kitchens.

RURAL HEALTH WORK

Twenty-four states of the union have taken advantage of the plan by which, at the request of the state health authorities in cooperation with the county officials, the United States Public Health Service lends financial and other material aid in the carrying out of a country-wide rural health program. The work is carried out to a large degree by resident volunteers working under the supervision of experts.

A wide field of personal and community hygiene is covered by the activities of the groups, and the volume of work accomplished attests the enthusiasm and efficiency of the workers. Dairies are protected from flies and other evils. Polluted wells are closed or purified and insured against further pollution. The health of school children is particularly emphasized—physical defects corrected so far as possible by general and such special clinics as dental. Infant and maternity hygiene is promoted in numerous ways. Clinics for the detection and treatment of tuberculosis and the venereal diseases are frequently established, and knowledge concerning their control effectively disseminated.

Madison County, Alabama, furnishes striking evidence of the effect of such health programs on the life and health of the community. The yearly death rate for ten years had averaged 19 per thousand residents. After three years of the organized rural health work, this rate has been reduced to 12.6 deaths per thousand residents. These figures are fair examples of the enormous value of systematic efforts toward individual and community health conducted under governmental patronage.

Keystone

TESTING THEIR WIND

These charming French girls are not blowing bubbles, nor yet serving an apprenticeship for the saxaphone. They are testing their lung pressure by means of the spirometer at the Fort Romen Physical Culture Institute, France. The average person, by exhaling into the instrument, can exert 3½ liters, or quarts, of air pressure, while athletes have been said to register five quarts of pressure.

USE OF SUGAR 100 YEARS AGO

In a review from a *Delineator* article in the October number of HYGEIA a statement was quoted as follows: "The consumption of sugar in the United States has increased rapidly from eight pounds to every dozen persons a century ago, to more than one hundred pounds in 1922."

Dr. H. W. Smith of Roodhouse, Ill., comments on this statement as follows: "In your article (October number, page 468) on sugar consumption you say that people now use twelve times as much sugar per capita as they did one hundred years ago per capita. As the people of that time consumed large amounts of honey, sorghum, and maple syrup as well as maple sugar, there was no way of keeping a record of these substitutes for sugar, especially in rural districts. In my opinion the pioneers and early settlers were well supplied with sweets."

It is quite probable, as Dr. Smith says, that the use of these substitutes for sugar may not have been so limited as the figures in reference to the consumption of cane sugar would seem to indicate. But it still remains true that the use of sweets in our time greatly exceeds that of a century ago, or of even fifty years ago, and that the people of the United States consume larger quantities than do the people of most other countries.

"MORE SLEEP" CAMPAIGN

Franklin's old adage, "early to bed and early to rise" is finding practical application this year in the schools of Sioux City, Iowa, where recently members of the Parent-Teacher Council inaugurated a "More Sleep" campaign. The campaign was initiated by having a physician, the probation officer and the superintendent of schools give talks on the need of more sleep from the standpoints of health, morals and school efficiency.

With the conviction that it was first necessary for parents to realize the necessity for more sleep for their children, the council drew up the following agreement which was to be signed by the parents:

"We the undersigned, parents of the children of B——— Grade School, realizing that there can be no real and permanent health for children without regular and sufficient sleep and that this responsibility rests upon the parents, and primarily upon the mothers, do hereby resolve and agree to make every reasonable effort to have our children in bed not later than eight-thirty p. m. (nine o'clock for Junior High) five nights in the week during the school year. In doing this we believe we are helping each other to raise the standard of health in the city."

Securing of signatures was left to individual parent-teacher circles, and in many districts a house-to-house canvass was made to obtain them. School principals aroused the children's interest by means of a competition to see what school could obtain the largest percentage of parents' signatures. Buttons with a clock face, the hands pointing to eighty-thirty, were given to the children whose parents signed the agreement.

Although the campaign has not been in progress long, teachers and parents are said to agree that the children are healthier, better and more alert.

PLAY SCHOOLS FOR CHILDREN

Several communities have made a success of "the play school," a nursery at which small children are left during the day so that the mother can be free for household tasks. The director of the school is assisted in most instances by two or three mothers of the community.

Instead of proving a place where communicable diseases are spread, the play school, if well conducted, minimizes such risk. If the child does not seem well at the nursery, his temperature is taken, and he is isolated if it is above normal. If he begins sneezing or coughing, he is isolated until he can be sent home.

Instruction in health habits is a definite part of the day's program in such schools. In the middle of the morning and the afternoon crackers are served. The children go in groups to wash their hands before they eat; after eating they rest on the floor for five minutes or longer. They are guarded against overfatigue by the use of a quiet room or by intervals of story telling.

QUESTIONS AND ANSWERS

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. If the question is of general interest, the answer will be published; otherwise it will be sent by mail. Questions are submitted to recognized authorities in the several branches of medicine and answers framed by them. The names of correspondents will not be published. Diagnoses in individual cases will not be attempted nor treatment prescribed.

Blood Pressure

To the Editor:—I am a woman nearly 43 years of age. I am five feet four and a half inches tall and weigh 164 pounds. My blood pressure is 140. What can I do to bring it back to normal? What diet shall I follow as to kind and quantity of food? How much exercise may I take for reducing?

R. A. R., Washington.

Answer.—A pressure of 140 at the age of 43 is not in itself alarming. Have a careful physical examination made to discover any existing trouble and take appropriate treatment if any is found. Be moderate in all things—diet, exercise, and rest. Avoid overeating rather than any particular food. Drink not less than three pints of water each day.

Hyperacidity

To the Editor:—My physician says I have hyperacidity of the stomach. Would exercise and a prescribed diet aid in overcoming this condition? The only exercise I take is a three-mile walk every day to and from work. Is this condition of the stomach a serious one or one that might result seriously? V. S., Indiana.

Answer.—By hyperacidity I presume is meant a burning feeling in the upper abdomen after eating, with perhaps belching of gas and of acid fluid and some nausea. These are the symptoms usually called "hyperacidity." In such cases of "hyperacidity," very seldom is there any real excess of acid in the stomach. The symptoms are due rather to a slight change in the churning motion of the stomach as a result of which the normal acid gastric juice is carried back to a part of the stomach where normally it should not be. The disturbance is one of motion of the stomach rather than of its secretion, and the immediate cause usually is a cramp of the pylorus, or gateway from stomach to bowel. The treatment can only be determined after careful examination, for of every twenty patients who have these symptoms only one, or at most two, have any stomach trouble. When the fire bell rings the fireman does not pour the water on the fire bell. He recognizes the signal and goes where there is fire. So the symptoms of hyperacidity are signals of troubles which may be almost anywhere in the body, and to quiet this acidity directly is just as wise as stopping the fire bell. The majority of cases with hyperacidity have chronic constipation, trouble with the gall bladder, trouble with the appendix, colitis, or several quite different troubles. For this reason treatment should follow careful examination.

Itching of the Anal Orifice

To the Editor:—If possible I would like to get some information concerning the cause of itching at the anal orifice or lower opening of the intestinal tract. I have been operated on without relief. Could excessive use of tobacco cause such itching? Is this itching dangerous in any way? My health is good except for this, and it never gives me any trouble. J. I. R., Kansas.

Answer.—Pruritus ani—itching at the anal orifice—may be due to a number of causes. Among these are intestinal worms, constipation, fissures and "piles" or hemorrhoids. Among the diseases giving rise to such itching are eczema and infection with ringworm. In recent years infection of the skin about the opening with the colon bacillus, streptococcus faecalis, or other bacterial organisms present in the intestine, has been ascribed as an occasional cause.

Excessive use of tobacco has been suggested by some writers as a cause of the itching, but this theory is not generally held. Pruritus is not dangerous in any way except that the continued itching may tend to produce physical or mental exhaustion, particularly if it interferes with sleep.

Wry-neck

To the Editor:—Will you advise me what the latest and best procedure is in the case of acquired wry-neck? Is it curable? Have had wry-neck for more than a year, although all sources of infection have been removed. Is the only relief to be found in massage and passive movements and daily application of heat? Can you refer me to reading material on the subject? I shall appreciate anything you may offer. B. R., Illinois.

Answer.—Acquired wry-neck is usually caused by some injury to one of the cranial nerves. The injury may be traumatic as from a twist, gun shot, or stab wound, but usually is caused by some acute infection, most frequently tonsillitis, influenza, or rheumatism. It resists all treatment in some cases, while in others it responds quickly when the exciting cause is removed. It frequently recurs and this makes it very troublesome.

Local applications, heat, and massage are all beneficial, but often only temporary. In some of the stubborn cases the nerve has been stretched and even cut by a surgeon.

You should consult a good physician and have him determine the real cause and the proper remedy in your case.

Catarrh of the Head

To the Editor:—I am troubled with catarrh of the head, which is very disagreeable and embarassing at times. I spend most of my time in the open, which is the only remedy I have tried. Can you tell me of anything that is good for this ailment?

R. C. T., Haiti.

Answer.—The term "catarrh of the head" is commonly applied to symptoms which may be caused by any disease of the nose or throat. Where these symptoms are caused by alterations in the membranes lining the nasal passages, such alterations are usually in the nature of permanent changes so that no form of treatment could be expected to restore the membranes to an entirely normal condition.

Very often the symptoms in these cases of so-called catarrh are dependent largely on the accumulation of abnormal secretions in the nose, sometimes in crust formations. Such conditions are best relieved by simple irrigation of the nasal passages.

Where the symptoms of the so-called head catarrh are dependent upon diseases outside the nasal passages themselves, that is, in the cavities which surround the nasal passages, the so-called nasal sinuses, local treatment such as here suggested could, of course, not be

expected to afford very much relief. Such conditions demand the assistance of a physician with experience in diseases of these parts. The best advice to patients suffering from head catarrh is to find out from such a physician just what is causing these symptoms before attempting any particular line of treatment. Irrigation, however, should be done only under the direction of a physician. Unless carefully done it is not without danger.

Gallstones

To the Editor:—Please tell me if a man 76 years old, who has run down from 170 to 130 pounds in weight from the so-called gallstone trouble—although no stones have been passed, nor have severe pains been experienced—can be successfully operated on for gallstones or for appendicitis. Is there any advice which might be of use to me in regulating diet in this trouble?

R. C. T., Mississippi.

Answer.—Although the removal of the gallbladder is the accepted form of treatment of chronic gallbladder infection, with or without stones, and although such operations are usually successful, a surgeon would hesitate to operate on a weakly man 76 years old unless such an operation seemed imperative.

A gallbladder operation is considered a major operation, and requires considerable power of endurance on the part of the patient. Complications may set in during convalescence, arising from other organs than the gallbladder, such as the heart or kidneys. This means that an operation should not be attempted unless conditions are favorable, or the condition of the gallbladder is such that it must be operated upon in spite of the risk to which the patient may be subjected. In the hands of a good surgeon the risk and liability of the operation are always weighed against the seriousness of the condition of the patient.

As to diet, there are two general rules which seem to be of value: avoid heavy meals, taking more frequent small meals; avoid fatty foods. One with such symptoms should consult a competent physician and follow his advice.

Vichy Célestin

To the Editor:—(1) Kindly advise if the French bottled water, Vichy Célestin is a drink to be recommended without a prescription. Should one drink it at meals? Is it alkaline? (2) Is horseback riding bad for a person with a tendency to floating kidneys? (3) Which is better in one's bath, borax or common salt? Are these so-called sea salts meritorous? What is the best kind of castile soap?

A. M., California.

Answer.—1. Vichy Célestin is too strong an alkaline mineral water to be taken without definite indications that treatment is needed. It is not suitable for exclusive use as an ordinary table water.

2. Horseback riding might be bad for a person with a high degree of tendency toward kidney displacement.

3. Borax softens hard water. Common salt or sea salt does not. Added in liberal quantities they stimulate the nerve endings of the skin and favor the onset of "reaction" in a cool bath. Olive oil castile soap is the best kind of this type of soap.

Dangers of Zinc Stearate

To the Editor:—I am a greatly interested reader of your journal and come with my greatest problem. Last year my baby, aged 6½ months, got hold of a talcum powder box, the much advertised baby powder—Zinc Stearate. It got in her nose and mouth and she seemed to fall into a coma and became deathly white. I called our family doctor at once, and he laughingly told me it was nothing to come for, that she would be all right. Baby did not seem to get better, so we sent for a neighbor's doctor who also told me it was nothing to worry over. Baby kept growing steadily worse, and a third doctor was secured who told us it was too late. On the third day baby died.

Now I hear of another case, a three weeks' old baby whose mother used the same dusting powder; this baby died the second day. What does this powder contain, and if it is so dangerous why do they not supply the can with a proper cover to keep it closed? I do not think any mother could have been more careful, but that one unguarded moment proved fatal.

H. J. B., Illinois.

Answer.—Many unfortunate accidents of the kind referred to in the grief-stricken mother's letter have occurred recently. It is indeed surprising that manufacturers will persist in supplying this dangerous dusting powder in containers of the present form. Stearate of zinc is particularly dangerous because it adheres tenaciously when breathed into the bronchial tubes and lungs, and sets up inflammation which results in fine bronchitis and pneumonia. Mothers and nurses should be warned not to give these dusting powder cans to children to play with. Manufacturers should be compelled to put a scare label and a warning on each container.

At the last meeting of the American Medical Association a resolution was introduced and passed by the House of Delegates as follows:

> Whereas, There is an increasing hazard to infant and child life from the accidental aspiration of zinc stearate which is used as a baby dusting powder, the Section on Diseases of Children, by unanimous vote, does hereby recommend that such action shall be taken in cooperation with the manufacturers of said dusting powder, so that caution labels shall be placed on all containers of said powders, and that such changes shall be made in the form of said containers so as to prevent the frequently occurring illnesses and fatalities in instances where such powders are used.

The public should be warned against the danger which lurks in these powders and if manufacturers do not quickly comply, the more dangerous powders should be prohibited from sale. It seems unthinkable that these products should be permitted to be distributed to the public and in many instances to cause untold suffering and death.

Cat's Eyes and Human Eyes

To the Editor:—1. Do drops used in ocular examinations affect astigmatism? 2. Why does the human eye not shine at night as a cat's eye does? 3. What is the disease which causes a growth on the outside of the cornea? 4. Is it correct to call it a cataract?

M. A. P., Colorado.

Answer.—1. No, except that such drops temporarily paralyze the muscles of the eye that adjust the shape of the lens so as to bring objects to a focus on the retina. In persons whose eyes are astigmatic, these muscles partly compensate for the astigmatism by altering the shape of the lens to conform with the abnormality.

2. The shine of the cat's eye at night is due to the reflection of light from the retina, the pupil being dilated as widely as possible. The human pupil does not dilate so widely as does the pupil of the cat; this accounts in part for the fact that the vision of man at night is not so sharp as that of the cat. Furthermore, the reflection from the human retina is red, a color that is not so easily visible as is the yellow that is reflected from the cat's eye. Under appropriate conditions the reflex from the human eye is visible at night just as is the reflex from the cat's eye, but it is red and not yellow.

3. The most common growth on the outside of the cornea is called pterygium. This is a growth of con-

nective tissue from the conjunctiva, the delicate membrane that covers the white part (the sclera) of the eye onto the cornea, and is usually symmetrical in both eyes. It is dangerous only when it has advanced far enough to cover the pupillary part of the cornea. There are other conditions that may cause a growth on the outside of the cornea, but they are very rare.

4. It is not correct to call such a growth a cataract, since a cataract is an opacity of the lens within the eyeball just behind the colored portion known as the iris.

Anemia

To the Editor:—I have a form of anemia where the white cells are normal but the red cells are very deficient in number, and the cells are of all sizes and shapes. There is no nucleus in the cells. Some are very large and some are very small. I have been shown the cells by my doctor. He named the kind of anemia which he thought it was; it is of the primary kind, and he thinks it incurable. What would be your opinion as to the kind of anemia it is, and do you consider it incurable? T. G., North Dakota.

Answer.—From your description it is very likely that you have a case of pernicious anemia, since there is so great a variation in the size of the red corpuscles, or cells, and since the white corpuscles are normal. If this presumption is correct you might improve for an indefinite period, but recovery is not certain.

Egg Shampoo

To the Editor:—Does egg cleanse the scalp, and is it a good method of shampooing? M. S. E., California.

Answer.—An egg shampoo cleans the scalp fairly well because most semi-liquid albuminous substances like egg-white make an emulsion which softens and carries away dirt. There is no advantage, however, in an egg shampoo. The best shampoo is with soap and water—liquid soap or solid soap as the individual prefers. For a soap for this purpose there is nothing better than a good soap made by one of the reputable manufacturers. Soap is useful only as a cleansing agent. It is not a medicine and cannot be made one for the scalp or hair by putting medicines in it. Good soaps are pure soaps, and special claims beyond purity that are made for soaps as remedies for the scalp and hair and skin are without scientific foundation.

Fibroform

To the Editor:—Kindly advise me what you know about the Dr. William P. Nolan Tuberculosis Cure "Fibroform." L. A. R., Wisconsin.

Answer.—"Fibroform," which is essentially secret in composition, is put forward on a basis of inadequate tests and seems to be exploited in connection with an instrument that Dr. Nolan has for sale. Much better evidence must be forthcoming before one would be justified in asserting that Fibroform is even of value in, much less a cure of, tuberculosis.

Milk and Fish for the Same Meal

To the Editor:—I should be pleased to have you discuss in your columns the advisability of drinking milk during a meal when canned fish, particularly salmon, is eaten. The opinion seems to prevail that ill consequences must necessarily follow when canned fish and milk are taken together. J. W. R., Arkansas.

Answer.—Unless a person has an idiosyncrasy for canned fish, there is no objection to his taking milk when canned fish, such as salmon, is eaten. Many persons have taken milk at the same meal with canned salmon, without any unfavorable reaction. Most likely the idea of incompatibility has arisen from the eating of canned fish that was spoiled.

Dr. Alsaker of St. Louis

To the Editor:—I would like to know, solely for my own guidance, the standing of Dr. A. L. Alsaker of St. Louis, who has written a number of health books and gives a mail course as well as office treatments. He writes and advertises in Physical Culture Magazine, or has done so in the past. A. J. S., Rhode Island.

Answer.—Alsaker and his methods were discussed in the *Journal of the American Medical Association* more than a year ago. The matter has been reprinted as a leaflet, which will be sent on request to those who send a stamped addressed envelope.

Poisoning from Ivy and from Sumach

To the Editor:—What drug can I safely carry with me to use to prevent poisoning from ivy and from sumach, to be applied immediately after contact with the offending foliage? W. C., Illinois.

Answer.—Ivy and sumach contain a resinous substance, which in contact with the skin may produce irritation. This resin is insoluble in water, but it may be removed by a strong soap solution or by alcohol. A heavy soap lather over the entire body should be followed by thorough rinsing. Alcohol to remove the irritating resin can be purchased, medicated, at the drug store. The clothing worn when the poisoning occurred should not be worn again until it has been brushed and aired thoroughly, and any portion of it known to have been in contact with the poisonous plant has been cleaned. Protection is sometimes afforded by the smearing of oils and fats over the exposed parts of the body before entering the area in which the sumach or poison ivy grows.

Syphilis in Iceland

To the Editor:—I have read that syphilis has never become widely spread in Iceland. Will you give me any information that you may have on this matter? F. H., New York.

Answer.—Bloch states that syphilis was not observed in Iceland until 1753, when it was recognized among certain employes in a manufacturing establishment at Reykjavik. It appears that even then this disease did not gain a foothold on the island, and soon it disappeared altogether. Finsen, who practiced medicine in Iceland for nine years in the twenties of the last century, stated that the disease was introduced for a second time in 1824, but that he saw only five cases and these were confined to foreigners. Finsen remarks that it is strange that notwithstanding the fact that Iceland is visited annually by the men from hundreds of trading and fishing boats, the disease has not spread among the natives. If this is true, there can be but one explanation, and that is that sexual promiscuity does not prevail among the natives of Iceland as it does in Europe and America.

Burning of the Eyelids

To the Editor:—I have been told that the burning sensations in the eyelids is caused by congested liver. Could you give some suggestions that will be helpful? A. E. D., New York.

Answer.—Burning sensations of the eyelids are almost invariably due to one of two causes. The

first is a local irritation of the lining membrane of the eyelids, the conjunctiva, from dust or infection or some local irritant. The second is a redness of the conjunctiva, produced and maintained by the effort of endeavoring to overcome some error of refraction, so-called eyestrain. Only exceptionally is there some constitutional cause for the burning sensation. For relief from the annoyance you should consult your oculist.

Heliotherapy
Early Numbers of Hygeia

To the Editor:—1. Have you an authoritative book on heliotherapy? I am particularly interested in knowing the part the "sunbath" should or can play in a rational system of personal hygiene designed to build health and strength and increase resistance to disease. 2. How long have you been publishing HYGEIA and are back numbers available?

B. J., Oklahoma.

Answer.—1. The Association does not publish any text book on sunlight therapy, and so far as we know no one has yet worked out the exact amount of sunlight necessary for a well ordered normal existence. It is known, however, that a certain amount of sunlight is important for proper development of the body and that overdosage of sunlight is manifested by unpleasant symptoms.

2. The first issue of HYGEIA was that for April, 1923. Back numbers of all early issues are still available.

Is Congenital Dislocation Hereditary?

To the Editor:—Is there anything hereditary about congenital dislocation of the hips?

P. L., Kentucky.

Answer.—Since most of the cases of congenital dislocation of the hips occur in families in which there is no preceding history of such a deformity, it cannot be said to be hereditary, although there is a tendency for mothers with congenital dislocation of the hip to give birth to children with similar dislocations.

Treating Scratches on the Skin

To the Editor:—How should little scratches on the skin be treated to prevent their being avenues for infection?

M. E. L., West Virginia.

Answer.—Careful cleaning with boiled water should be followed by the application of tincture of iodine.

Huntington's Chorea

To the Editor:—What is Huntington's chorea?

M. A. P., Colorado.

Answer.—Chorea is the name applied to what is often spoken of as St. Vitus' dance, which is due to infection with the germs of acute rheumatism. In this disease, which is also called Sydenham's chorea, the most striking symptom is the restless twitching or jerking movements. It has become customary to speak of movements of this type, regardless of their cause, as choreic. Huntington's chorea is a disease that has nothing in common with rheumatic chorea except the nature of the restless, erratic movements. The cause is not known. The disease usually appears after the age of thirty, sometimes much later, and shows a tendency to run in families. As a rule it becomes slowly worse and is often accompanied by mental changes. These mental changes may consist of loss of memory and interest similar to those of old age, but in some cases they are more active and acute and may even necessitate commitment of the patient to a hospital for mental diseases.

Hardening of the Coronary Artery

To the Editor:—I was recently told by my physician that I am suffering from sclerosis [hardening] of the coronary artery, causing a deficient flow of blood to the heart muscles and was advised to take as complete rest as possible for a time and to exercise great care concerning any violent physical exercise. Would you advise dieting in any way as a means of relief in such cases? Would you advise a vacation at sea level?

C. A. G., Colorado.

Answer.—1. Keep in constant touch with your physician, seeing him not less than once a month.

2. Avoid all exercise, both mental and physical, which puts any strain on you.

3. A general, mixed diet, with less than the ordinary amount of meat, is best.

4. Limit the amount of ordinary table salt.

5. Drink not less than two quarts of water daily.

6. You should consult your physician as to the best place to spend a vacation.

Leucorrhea

To the Editor:—I would be pleased to have you give me some information on the subject of leucorrhea. I am a young lady twenty-three years old and have been troubled with leucorrhea for several years. I have lost weight and do not feel nearly as strong as I did before this bothered me. The discharge seems to stain my underwear. I bathe daily and am particular about my personal habits. I would be grateful for some advice.

R. L. M., Ohio.

Answer.—Leucorrhea is a symptom which may be present in a number of conditions affecting women. Sometimes it occurs in the absence of any other symptoms, and in young women is, perhaps, of little importance. In later life it may be evidence of some condition requiring prompt treatment. In women approaching change of life the appearance of such a discharge should be considered serious until proved of no great importance.

The diseases in which there may be a vaginal discharge are infection, debilitating diseases, and tumors. Contamination is the most frequent cause of leucorrhea. A frequent cause of leucorrhea in girls is the pernicious custom of using a douche after each menstruation: the danger is equally great in women who use the douche as a matter of cleanliness. A douche washes away the normal bacteria; if the douche point is not sterilized it may carry in certain disease-producing germs which will grow, will alkalinize the area, destroy the normal bacteria, and infect the glands. A vaginal douche always should be given with a sterile (boiled) point.

After an abortion, miscarriage, or termination of a full time pregnancy, leucorrhea may appear, resulting from the relaxed parts, as the avenues for the entry of bacteria are broader. This is usually temporary.

A debilitating disease lowers the resistance of the individual against infections such as leucorrhea.

At times, the glands in the canal greatly enlarge, accompanied by profuse leucorrhea. Tumors of the vaginal canal or uterus, usually early produce a discharge: a woman of 35 years or more who notices a watery discharge, often brownish in hue, should seek competent authority at once for an examination, for curability of cancer is entirely dependent on early treatment by a trained gynecologist.

It goes without saying that the diagnosis of the disease producing leucorrhea rests entirely with a physician. As the source of the discharge is almost always in the cervical canal, it is self evident that vaginal douches cannot be curative. At most they may alleviate the distressingly irritating effects of the discharge, and may promote a more normal condition.

Protect Your Children Against Diphtheria

Recent laboratory and clinical investigations prove that nearly all individuals can be immunized so that repeated exposures to diphtheria will not produce the disease. The protective inoculations can be given by any physician. Ask your doctor to protect your family.

THE diphtheria toxin which is injected into horses in order to produce antitoxin protects the horses to the extent that subsequent large doses of toxin do not even make them seriously ill. But the blood serum of these horses (diphtheria antitoxin), when injected into human patients, gives protection against the disease for only a relatively short period of time.

A way has been found whereby toxin can be safely administered to human patients to produce antitoxin right in the blood of these individuals. Antitoxin so made imparts a prolonged protective immunity.

The addition of a carefully measured quantity of diphtheria antitoxin to a minute dose of the toxin deprives the toxin of its poisonous quality and does not interfere with its desirable antitoxin-producing property.

The name of this combination of toxin and antitoxin is toxin-antitoxin mixture or Diphtheria Prophylactic.

The utmost precision is required to achieve the delicate adjustment between the toxin and antitoxin. Too much toxin makes the mixture poisonous; too much antitoxin makes it valueless.

Our equipment, our skill, and our serious sense of responsibility are warrant for the quality of Diphtheria Prophylactic—the toxin-antitoxin mixture manufactured in our laboratories.

PARKE, DAVIS & COMPANY

ASK YOUR DOCTOR TO PROTECT YOUR FAMILY

Dr. Deimel (Linen-Mesh) Underwear

IN their endeavor to protect themselves against exposure, people are apt to overburden themselves with underwear, especially in winter.

Twenty-eight years of extensive experience have proven that the Dr. Deimel Linen-Mesh Underwear is a most protective and comfort-table garment for any season and any climate. The advantages of wearing the Dr. Deimel Underwear in regard to health and comfort are such, that even a comparatively short trial will convince the most skeptical. It is the underwear of safety.

~

It is made for men, women and children.

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DEIMEL LINEN-MESH CO.
San Francisco New York

MOBILIZING AGAINST TUBERCULOSIS

(CONTINUED FROM PAGE 585)

of cases the attainment of those ideals which have been entertained, but never reached, during the twenty-five years that a small part of the thinking public has been actively interested.

There remains one other problem to be solved which is only second in importance to the detection of the early case and this is the problem of maintaining the ground won by sanatorium treatment. A certain proportion of cases admitted to the sanatorium will grow progressively worse whatever we may do. A certain proportion (larger or smaller in proportion as treatment is begun early or late) will receive a more or less permanent cure and may return to the battle of life as if nothing had occurred. The major proportion of our cases, however, at the present day belong to a third class. They improve under sanatorium care and are discharged as arrested cases; but when they return to the living and working conditions of the outside world the stress proves too great, their vital resistance is lowered, and the disease "lights up" again.

After-Care of the Arrested Case

It is essential in planning a complete community program of defense against tuberculosis, that we should make some provision for the supervision of the arrested case. In England this has been accomplished in certain instances, as at Papworth in Cambridgeshire, by establishing industrial colonies where discharged patients may live a normal family life and earn their living but under good housing and working conditions and with periodic medical examination to detect any signs of the return of the disease.

The development of convalescent colonies of this kind has been advocated by some of our leading tuberculosis specialists in this country. Others believe that the psychological effect of such special semi-sanatorium life is harmful and that it is much better for the patient to return to his own home environment, provided that reasonably good living and working conditions can be found and provided that systematic medical and nursing supervision can be organized. In Boston special classes have been formed for arrested cases of tuberculosis and the patients have done exceedingly well in the normal life of their homes with the help of instruction offered by nurses. In

(Continued on page 10)

WEST SOAPARATUS

A Gravity Liquid Soap Dispensing System

With other improvements, time has brought about a change from the old way of washing—a West development for dispensing liquid soap in a clean, satisfying manner.

The Finishing Touch to the Up-to-date Washroom

One central tank supplies each washbowl fitted with our mechanically perfect Soaparatus valve. One push of the plunger releases a measured amount of the soap into the palm of the hand. West soap is bound to satisfy and West appliances will keep you satisfied. Write nearest branch.

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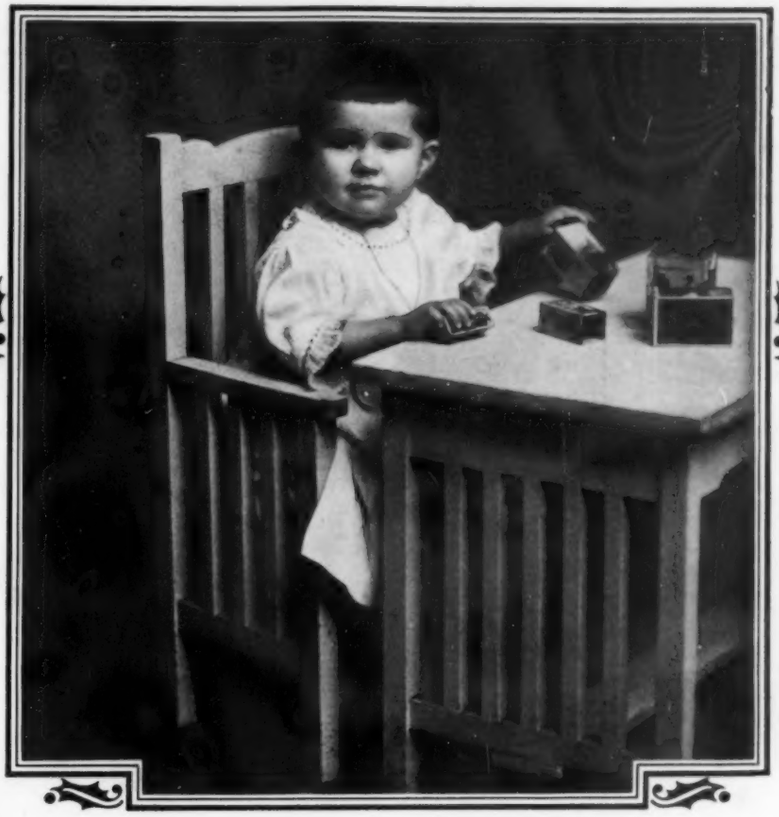

Mellin's Food—A Milk Modifier

In deciding upon a method to follow in preparing food for the baby obliged to subsist on an artificial diet, there are certain considerations that lend an important influence in the selection of a milk modifier.

FIRST. Is the modifier readily digestible in itself?

SECOND. Are the food elements present in the modifier in definite amounts?

THIRD. Is the modifier free from bacteria or any other objectionable substance?

FOURTH. Does the analysis show that the modifier is composed of food elements well calculated from a scientific standpoint to meet the generally recognized requirements?

FIFTH. Is the modifier capable of being employed without following complicated directions, or in other words, can the modifier be applied in a simple and practical manner?

Careful study of the suggested considerations in relation to Mellin's Food in particular would bring out in each case an affirmative answer. It would, therefore, appear that Mellin's Food has much to recommend it when it becomes necessary to decide upon the modifier in the preparation of an infant's diet.

Mellin's Food Co., 177 State St., Boston, Mass.

THE FOOD-DRINK FOR ALL AGES

Endorsed by health authorities

The Original Malted Milk

(Avoid imitations)

A nutritious table drink,

especially for growing children and those who are subject to nervous, anaemic and digestive disorders.

Refreshes and invigorates

whenever tired or hungry. Drink "Horlick's" at home, office or fountain. Used by athletes and physical culturists.

For infants and in the sick room

Very reliable in the prescribed feeding of nursing mothers, and during illness.

Literature on its home uses and advantages, together with sample, prepaid on request.

HORLICK'S

Racine, Wis.

MOBILIZING AGAINST TUBERCULOSIS

(Continued from page 8)

fact no community has done its duty in the control of tuberculosis unless it has made some definite provision for the supervision of the arrested cases.

One of the strangest things in the whole field of tuberculosis work is its neglect by the health authorities of the community. Of the eighty-three large city health departments studied in 1920 only twenty-nine had any portion of their budget specifically earmarked for tuberculosis work, only thirteen had a separate bureau of tuberculosis, and only six a full-time director of antituberculosis work.

Responsibility of the Health Department

The splendid initiative of private agencies in the fight against tuberculosis may well be a source of national pride; yet after all the official health authorities of the community cannot properly divest themselves of all responsibility in regard to one of the two most important of the communicable diseases. Where tuberculosis nursing and tuberculosis dispensary work are well conducted by private agencies it will no doubt be best to leave these activities to them. The health department is, however, the only possible agency which can plan and coordinate the antituberculosis movement as a whole and make certain that all the necessary social machinery for combating this disease is in existence and efficiently operating. It should be a primary duty of the health department to obtain full reporting of cases of tuberculosis (in 1920 only two out of sixty-nine cities had anything like adequate reporting) and to maintain a systematic register of all such cases. It should be the aim of the department to see that all cases carried on the register are so cared for as not to be a menace to others, and to see that each case has opportunity and inducement to secure the necessary medical and nursing care, either at home or in an institution. If a private physician undertakes these responsibilities, well and good; otherwise the department should assume them.

It has been shown in Massachusetts that in small cities and rural districts a particularly useful function may be performed by providing an expert consultation service, so that the practicing physician may have always at his disposal the services of a specially

(Continued on page 12)

KNITTING YARNS and YOUR HEALTH

Knitting yarns are made of all wool, all cotton, or all silk fibres or mixtures of these. No matter what materials are used, the general principles of spinning yarns are the same for all fibres.

The first steps serve to remove natural impurities from the fibres. Later operations arrange the fibres in somewhat parallel order and draw them out in continuous succession.

The spinning process gives the twist to the yarn, very loose and soft in the case of knitting yarns. This loose twist is a very important health factor in knit underwear. A soft spun yarn is more absorbent, and dries more quickly than hard twisted thread. It is filled with air spaces which allow ventilation, and yet serve to conserve the heat of the body. A soft spun yarn is also very elastic and therefore important for body comfort in knit underwear.

Knit Underwear can be had in a fabric, weight and style for any climate—to suit any age in any occupation.

A HEALTH TALK

Send for a copy of our booklet, "First Principles of Underwear and Health," a real health message to men, women and children.

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7½ teaspoons of butter fat in every 16 ounce can

One of a series of recipes contributed to the American diet by Libby's Milk

Especially for children!

Here is a rice pudding, always a wholesome dish, planned especially for children. It was sent to us by Mary Miles West, of San Francisco, nationally known as a writer on child welfare subjects.

Note that it calls for a full can of Libby's Milk. That's to give it nourishing richness. For every sixteen-ounce can of Libby's Milk contains 7½ teaspoons of butter fat.

And there's real economy in using Libby's, a saving of one-third over ordinary milk.

Why it's double rich

Libby's Milk is double rich because it is the purest, richest cow's milk that can be obtained, with more than half the water removed.

Every day a new supply of this milk is received in the large Libby condensaries in the heart of the finest dairy regions of the country, where it is thoroughly tested for its richness before being accepted.

After the tests, it is evaporated, sealed in air-tight cans, and sterilized. It is always pure when it reaches your table.

Write for free recipe folders

Upon request we will gladly send you copies of some new folders containing many excellent recipes sent by good cooks who use Libby's Milk. Write today.

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Children's Rice Pudding

Recipe from
Mary Miles West
San Francisco, Calif.

1 sixteen-ounce can Libby's Milk (tall size)
2 cups cold water
3 level tablespoons rice
4 rounded tablespoons sugar
1 teaspoon nutmeg

Mix the milk and water. Add the other ingredients and stir. Pour into a well-buttered baking dish and bake in a slow oven for three hours, or until the rice is very soft

Libby's MILK

The milk that good cooks use

MOBILIZING AGAINST TUBERCULOSIS

(Continued from page 10)

trained expert in this disease, who is paid for his advice.

We return now to the point at which we began this discussion, the responsibility of the physician, and the intelligent layman as well, for the maintenance of home defense against this great enemy of the human race. About one person in every thousand in your community will die next year of tuberculosis. It is, in large measure, a controllable disease, if some effective steps are taken to prevent it. What steps of this kind are being taken? What is the population of your community? How many deaths did tuberculosis cause in 1922? What dispensaries are available? How many new patients did they receive in 1922? How many visits were paid to the patients during that year? How many public health nurses are available for your tuberculosis work? From these data, and with a little simple arithmetic and comparison with figures cited earlier in this article you can form an idea of the extent and the adequacy of your defenses.

The famous passage in William James' essay on "The Moral Equivalent of War," applies very aptly to our case. "Men," he says, "are now proud of belonging to a conquering nation, and without a murmur they lay down their persons and their wealth, if by so doing they may fend off subjection. But who can be sure that *other aspects of one's country* may not, with time and education and suggestion enough, come to be regarded with similarly effective feelings of pride and shame? Why should men not some day feel that it is worth a blood-tax to belong to a collectivity superior in any ideal respect? Why should they not blush with indignant shame if the community that owns them is vile in any way whatsoever?" Surely that community which provides effective defenses against the ravages of tuberculosis is deserving of such civic pride, and the community which fails to provide appropriate defenses merits such civic shame.

THE NERVOUS CHILD

(CONTINUED FROM PAGE 568)

mother is not required to take care of her own child; lack of experience unfits her for this duty. To use a familiar expression: "She gets on the child's nerves." In these circumstances a competent nursery maid should be secured. This is more easily said than done, for nursery maids are human. Many are nervous and lack patience.

The infant should have an abundance of sleep. This fortifies him against nervous instability. Sleep should take precedence over everything. Nothing is more important for healthy development.

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ADDRESS.....

With my compliments

My Name.....

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MOBILIZING AGAINST TUBERCULOSIS

(Continued from page 10)

trained expert in this disease, who is paid for his advice.

We return now to the point at which we began this discussion, the responsibility of the physician, and the intelligent layman as well, for the maintenance of home defense against this great enemy of the human race. About one person in every thousand in your community will die next year of tuberculosis. It is, in large measure, a controllable disease, if some effective steps are taken to prevent it. What steps of this kind are being taken? What is the population of your community? How many deaths did tuberculosis cause in 1922? What dispensaries are available? How many new patients did they receive in 1922? How many visits were paid to the patients during that year? How many public health nurses are available for your tuberculosis work? From these data, and with a little simple arithmetic and comparison with figures cited earlier in this article you can form an idea of the extent and the adequacy of your defenses.

The famous passage in William James' essay on "The Moral Equivalent of War," applies very aptly to our case. "Men," he says, "are now proud of belonging to a conquering nation, and without a murmur they lay down their persons and their wealth, if by so doing they may fend off subjection. But who can be sure that *other aspects of one's country* may not, with time and education and suggestion enough, come to be regarded with similarly effective feelings of pride and shame? Why should men not some day feel that it is worth a blood-tax to belong to a collectivity superior in any ideal respect? Why should they not blush with indignant shame if the community that owns them is vile in any way whatsoever?" Surely that community which provides effective defenses against the ravages of tuberculosis is deserving of such civic pride, and the community which fails to provide appropriate defenses merits such civic shame.

THE NERVOUS CHILD

(CONTINUED FROM PAGE 568)

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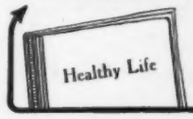

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PREVENT RABIES IN THE DOG

PASTEUR was acclaimed the greatest Frenchman that ever lived. Chief among his accomplishments that brought him honor was the development of vaccination for Rabies in persons bitten by rabid animals, thus saving tens of thousands of lives from a most dreaded disease.

Rabies is primarily a disease of the dog, yet until recently it was not recognized that the disease could be prevented in dogs, thus not only saving these animals, but preventing as well the discomfort and anxiety of persons who are bitten.

Through the extensive work of the Japanese investigators, AMENO and DOI, protective vaccination against Rabies in dogs has been developed. The results of the Japanese experiments have been very conclusive. Not only has their laboratory work demonstrated the efficacy of the method, but it has been further established by the very extensive vaccination of dogs in localities where Rabies prevailed.

This bronze, erected in front of the Pasteur Institute in Paris to commemorate Pasteur's successful vaccination against rabies, shows the shepherd boy Jean Baptiste Jupille wrestling with the rabid dog that bit him while he was protecting some younger children. The boy was vaccinated six days later. He is now janitor of the Pasteur Institute.

In this country the work of the Japanese investigators has been confirmed in the Lederle Antitoxin Laboratories by Drs. Eichhorn and Lyon, whose experiments have proven the high degree of protection in the immunized animal. These experiments are now being continued to determine the period of immunity conferred.

Considerable field work has also been done in this country and this work thus far corroborates the work of Drs. Eichhorn and Lyon. In an infected area in Connecticut 1,522 dogs were vaccinated. Six of these dogs were afterwards bitten by a known rabid dog and none developed Rabies. An interesting incident in the vaccination in Connecticut occurred when a known rabid dog bit two unvaccinated dogs and one vaccinated dog. The two unvaccinated dogs developed Rabies and the vaccinated dog did not develop Rabies.

Unquestionably we have in this new Rabies Vaccine an agent that is destined to eliminate Rabies if it is properly supported by the owners of dogs, municipal and state health authorities, and the public generally.

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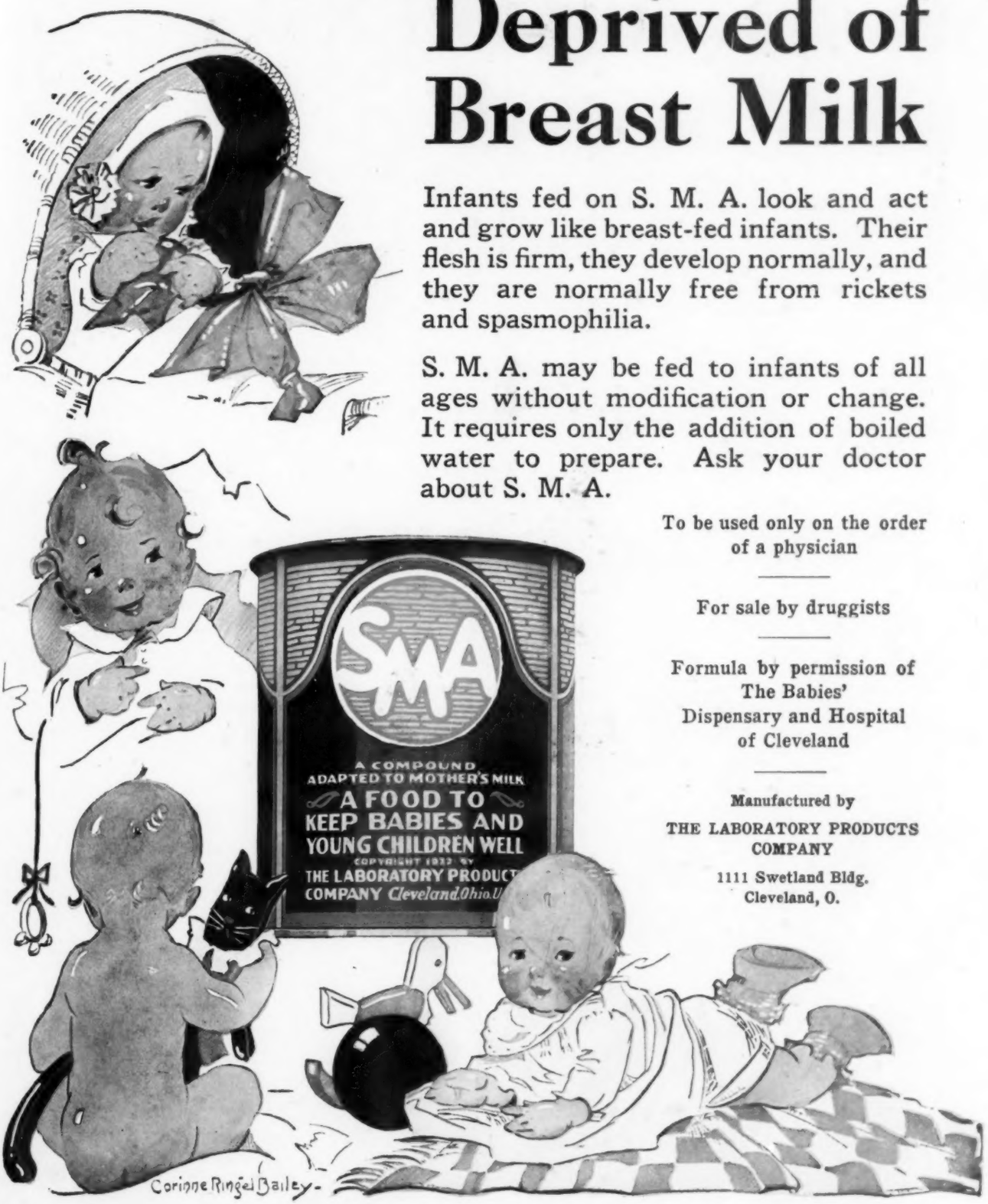
511 Fifth Avenue, New York

For Infants Deprived of Breast Milk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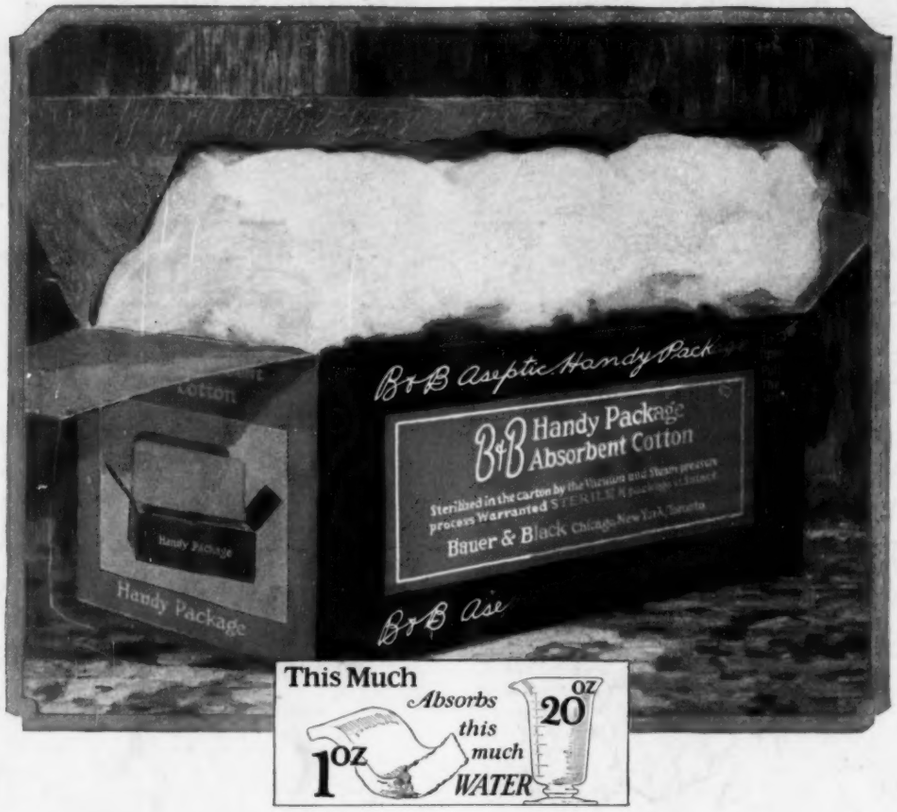
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This Much
Absorbs this much WATER
1 OZ
20 OZ

Absorbs 20 times its weight in moisture!

White, fluffy, soft and soothing as down, with the tremendous absorption of 20 times its weight in moisture, comes this sterile cotton, to meet household and *personal* emergencies.

The name is Bauer & Black Absorbent Cotton—the product of a great laboratory for 29 years serving the medical profession.

It is obtainable at all druggists. You can get it whenever you need it—there is always a drug store handy.

Countless uses

For many years this cotton has been used in leading hospitals, and by physicians and surgeons, because of its great absorbency and utter sterility.

Now, largely upon the advice of these doctors, it is performing almost countless duties in the home.

Women use it to meet personal emergencies. Mothers use it in the nursery to bathe baby's eyes—for sponging off his delicate skin; for corking his milk bottles.

For dressings, absorbent cotton is the only fit kind to use.

But—*it must be sterile.* Remember that.

Sterilized after sealing

Bauer & Black Absorbent cotton is sterilized in the making. Then it is sterilized again in the closed carton. Thus, it comes to you as nearly perfect as human ingenuity can make it. Every package is marked sterile—and it is sterile.

In several sizes at your druggist. Ask for it by name—Bauer & Black.

Be as careful as your doctor

Your doctor takes no chances. He uses *sterile* gauze, *sterile* bandages and *sterile* absorbent cotton.

By exerting his care, *you* can avoid infection in treating the little wounds which often result disastrously. Remember, *a clean cloth frequently harbors millions of germs.*

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